Tulare to Goshen Six-Lane Project

On State Route 99 between Prosperity Avenue in the City of Tulare
and north of the North Goshen Overhead in Tulare County, California
06-TUL-99-PM 30.6/41.3
06-360200
SCH No. 2008081020

Initial Study with Mitigated Negative Declaration/ Environmental Assessment with Finding of No Significant Impact

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by the California Department of Transportation under its assumption of responsibility pursuant to 23 U.S. Code 327.

October 2008

Caltrans

General Information About This Document

What's in this document?

This document contains a Mitigated Negative Declaration and Finding of No Significant Impact, which examine the environmental effects of a proposed project on State Route 99 in Tulare County.

The Initial Study/Environmental Assessment and proposed Mitigated Negative Declaration were circulated for public review and comment from August 7, 2008 to September 8, 2008. Comments were received on the draft document. The comments and Caltrans' responses to the comments are shown in the Comments and Responses section of this document, which has been added since the draft. Elsewhere throughout this document, a line in the margin indicates where changes have been made since the draft document was circulated.

What happens after this?

The proposed project has completed environmental compliance after the circulation of this document. When funding is approved, the California Department of Transportation, as assigned by the Federal Highway Administration, can design and construct all or part of the project.

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Sarah Gassner, Southern Sierra Environmental Analysis Branch, 2015 East Shields Avenue, Suite 100, Fresno, CA 93726; (559) 243-8243 Voice, or use the California Relay Service TTY number 1-800-735-2929.

SCH# 2008081020
06-TUL-99-30.6/41.3
06-360200

State Route 99 six-lane widening from post mile 30.6 to post mile 41.3 in Tulare County, California

INITIAL STUDY
with Mitigated Negative Declaration
/ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 U.S. Code 4332(2)(C) and 23 U.S. Code 327

THE STATE OF CALIFORNIA
Department of Transportation

6/27/08
Date of Approval

Christine Cox-Kovacevich, Office Chief
Office of Environmental Management, North
Central Region Environmental Division
California Department of Transportation

California Department of Transportation
Finding of No Significant Impact

FOR
State Route 99
Tulare to Goshen Six-Lane Project
between Prosperity Avenue and just north of the North Goshen Overhead
in Tulare County, California

The California Department of Transportation (Caltrans) has determined that Alternative 1 will have no significant impact on the human environment. This Finding of No Significant Impact is based on the attached Environmental Assessment, which has been independently evaluated by Caltrans and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. Caltrans takes full responsibility for the accuracy, scope, and content of the attached Environmental Assessment and incorporated technical reports.

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S. Code 327.

10/30/08
Date

Christine Cox-Kovacevich, Office Chief
Office of Environmental Management, North
Central Regional Environmental Division
California Department of Transportation

Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to widen State Route 99 from a four-lane freeway to a six-lane freeway between Prosperity Avenue and north of the North Goshen Overhead in Tulare County, California. The additional lanes would be constructed in the median. Weaving lanes would be constructed. Various structures within the project limits would be widened to accommodate the additional lanes. Three soundwalls, four infiltration basins, and side ditches would be constructed. A frontage road would be reconstructed.

Determination

The proposed project would have no effect on industry, the economy, employment, cultural resources, geology and soils, hazards and hazardous materials, water quality, paleontological resources, land use and planning, mineral resources, population and housing, public services, recreation, and utility/service systems.

In addition, the proposed project would have no significant effect on agricultural resources.

The proposed project would have no significantly adverse effect on visual resources, hydrology, biological resources, one displaced business, and noise, because the following mitigation measures would reduce potential effects to insignificance:

- Visual impacts would be mitigated by increased planting and aesthetic treatments to median barriers, soundwalls, and bridges.
- Hydrology impacts would be mitigated by the construction of four infiltration basins and side ditches.
- Biological impacts to foraging habitat of the San Joaquin kit fox would be mitigated through habitat replacement. Environmentally Sensitive Areas would be established for valley elderberry longhorn beetle habitat.
- One displaced business would be eligible for Relocation Assistance in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.
- Noise increases would be abated by the construction of three soundwalls.

Christine Cox-Kovacevich, Office Chief
Office of Environmental Management, North
Central Region Environmental Division
California Department of Transportation

10/30/08
Date

Summary

Effective July 1, 2007, Caltrans has been assigned environmental review and consultation responsibilities under the National Environmental Policy Act pursuant to 23 U.S. Code 327.

The California Department of Transportation (Caltrans) proposes to widen State Route 99 from a four-lane freeway to a six-lane freeway between post mile 30.6 at Prosperity Avenue in the City of Tulare and post mile 41.3, north of the North Goshen Overhead in the community of Goshen, in Tulare County, California.

The purpose and need of this project is to provide traffic congestion relief, improve Level of Service, and improve the safety and operations of this segment of State Route 99. This project would increase capacity between Tulare and Goshen to meet the existing and projected traffic volumes.

Two alternatives are being considered: Alternative 1, the Preferred Alternative, and the No-Build Alternative.

Alternative 1 would add a southbound lane in the median for the entire length of the project. A northbound lane would be constructed in the median except between post miles 34.4 and 37.2, where a new lane would be constructed on the east side of the freeway. Weaving lanes (acceleration, deceleration, and exit lanes) would be constructed at 10 locations to improve traffic flow near interchanges. Reconstruction of structures would be minimized; mandatory design exceptions would be required. The South Tagus Overcrossing would be replaced. Various structures would be widened to accommodate the new lanes. Design exceptions would be required on median width, vertical/horizontal clearances, sight distances, interchange spacing, and outside separations. An outside separation is the distance between a local frontage road and the freeway. Existing or new median barrier would be provided throughout the project limits except from post miles 33.0 to 33.6 and from post miles 37.2 to 39.6, where the existing median width does not require a median barrier. Three soundwalls would be constructed.

The No-Build Alternative would keep this segment of State Route 99 in its present condition.

Summary of Major Potential Impacts from Alternatives

Potential Impact		Alternative 1	No-Build Alternative
Land Use	**Consistency with the Tulare County General Plan**	Yes	No
	Consistency with the City of Tulare General Plan	Yes	No
	Consistency with the City of Visalia General Plan	Yes	No
	Consistency with the Draft Goshen Community Plan	Yes	No
Farmlands/Timberlands		6.6 acres	None
Relocation	**Business displacements**	One business' parking	None
	Utility service relocation	Yes	None
Utilities/Emergency Services		Utility relocation required Emergency medical and fire service could be delayed during construction	None
Hydrology and Floodplain		Encroaches in 100-year floodplain. Four infiltration basins and side ditches	None
Water Quality and Storm Water Runoff			None
Air Quality		Overall air quality benefit	Air quality reduced
Noise and Vibration		Three soundwalls proposed	None
Visual/Aesthetics		Removal of oleander shrubs and eucalyptus trees	None
Plant Species		Blue elderberry	None
Animal Species		Migratory Birds: Special Provisions	None
Threatened and Endangered Species		San Joaquin kit fox, Valley elderberry longhorn beetle, vernal pool fairy shrimp, vernal pool tadpole shrimp	None

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List of Abbreviated Terms

Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
FHWA	Federal Highway Administration
NEPA	National Environmental Policy Act
PM	post mile
EMFAC	Emission Factors
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
BT&H	Business, Transportation & Housing Agency
MPO	Metropolitan Planning Organization
CEC	California Energy Commission

Chapter 1 Proposed Project

1.1 Introduction

Effective July 1, 2007, the California Department of Transportation (Caltrans) has been assigned environmental review and consultation responsibilities under the National Environmental Policy Act pursuant to 23 U.S. Code 327.

Caltrans proposes to improve State Route 99 from Prosperity Avenue (post mile 30.6) to just north of the North Goshen Overhead (post mile 41.3) in Tulare County, California. The total length of the project is 10.7 miles. The existing four-lane freeway does not have enough capacity to meet existing and projected traffic volumes. The freeway also needs improvements to meet current engineering standards. See Figures 1-1 and 1-2 for the Project Vicinity Map and Project Location Map, respectively.

The proposed project is programmed in the 2006 Federal Transportation Improvement Program and the 2006 State Transportation Improvement Program as a capacity-increasing project. The project is included in the Tulare County Association of Governments' 2007 financially constrained Regional Transportation Plan. Interregional Improvement Program funds would be used for this 2002 State Transportation Improvement Program project.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of the proposed project is to:

- Increase capacity within the Tulare to Goshen State Route 99 corridor to meet existing and projected traffic volumes.
- Improve operations by meeting current design standards and adding merge lanes.
- Improve safety on State Route 99 from Tulare to Goshen in Tulare County.

1.2.2 Need

Capacity

According to the October 2004 *Tulare County General Plan Background Report*, State Route 99 is the most-traveled roadway in the county.

Table 1.1 shows that the current average daily traffic count within the project limits is 54,000 vehicles. By 2014, the average daily traffic count is estimated to be 67,500 vehicles. By 2034, the average daily traffic count will increase to 100,000 vehicles and, by 2044, the average daily traffic count will be 122,500 vehicles. Trucks make up 28 percent of this traffic.

Table 1.1 Projected Traffic Volumes Average Daily Traffic

Average Daily Traffic	2007	2014	2034	2044
Number of vehicles	54,000	67,500	100,000	122,500

Source: Department of Transportation Traffic Study, 2007

State Route 99 currently operates at a Level of Service "D" during peak hours. Level of Service is ranked "A" through "F," with "A" indicating the free flow of traffic, and "F" indicating the most congested conditions (see Figure 1-3). Important factors that determine Level of Service include travel speed, freedom to maneuver, and proximity to other vehicles. At Level of Service "F," the capacity of the roadway has been exceeded. The Route Concept Level of Service that is considered acceptable in rural areas and urban areas is Level of Service "C" and "D," respectively.

Much of this segment of State Route 99 is situated in a rural area with the beginning and ending of the project limits located in urban areas.

Table 1.2 shows the current and predicted Level of Service for State Route 99 without the project.

Table 1.2 Level of Service (No-Build Alternative)

Level of Service	2007	2014	2034
State Route 99 Post Miles 30.6/41.3	D	E	F

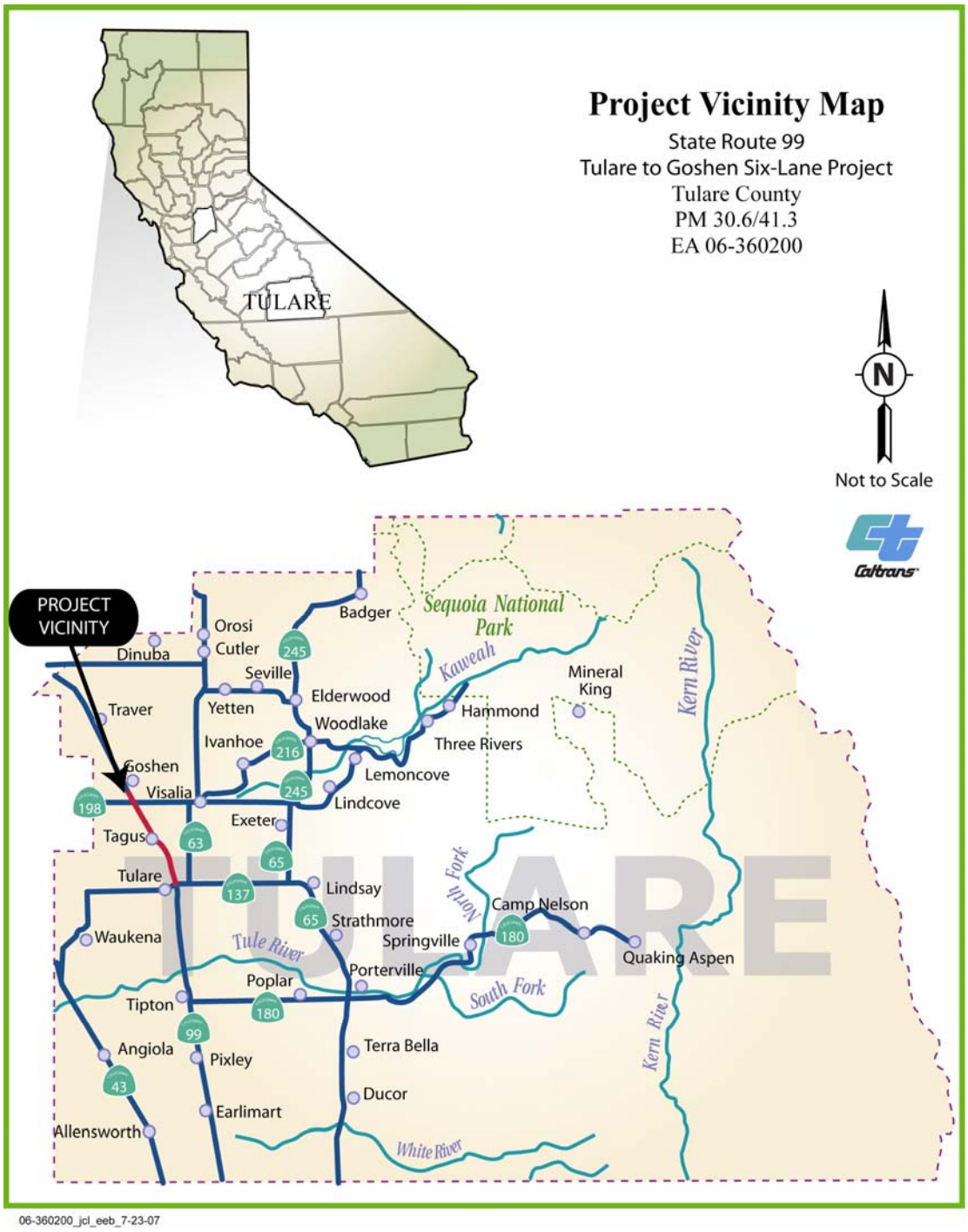


Figure 1-1 Project Vicinity Map

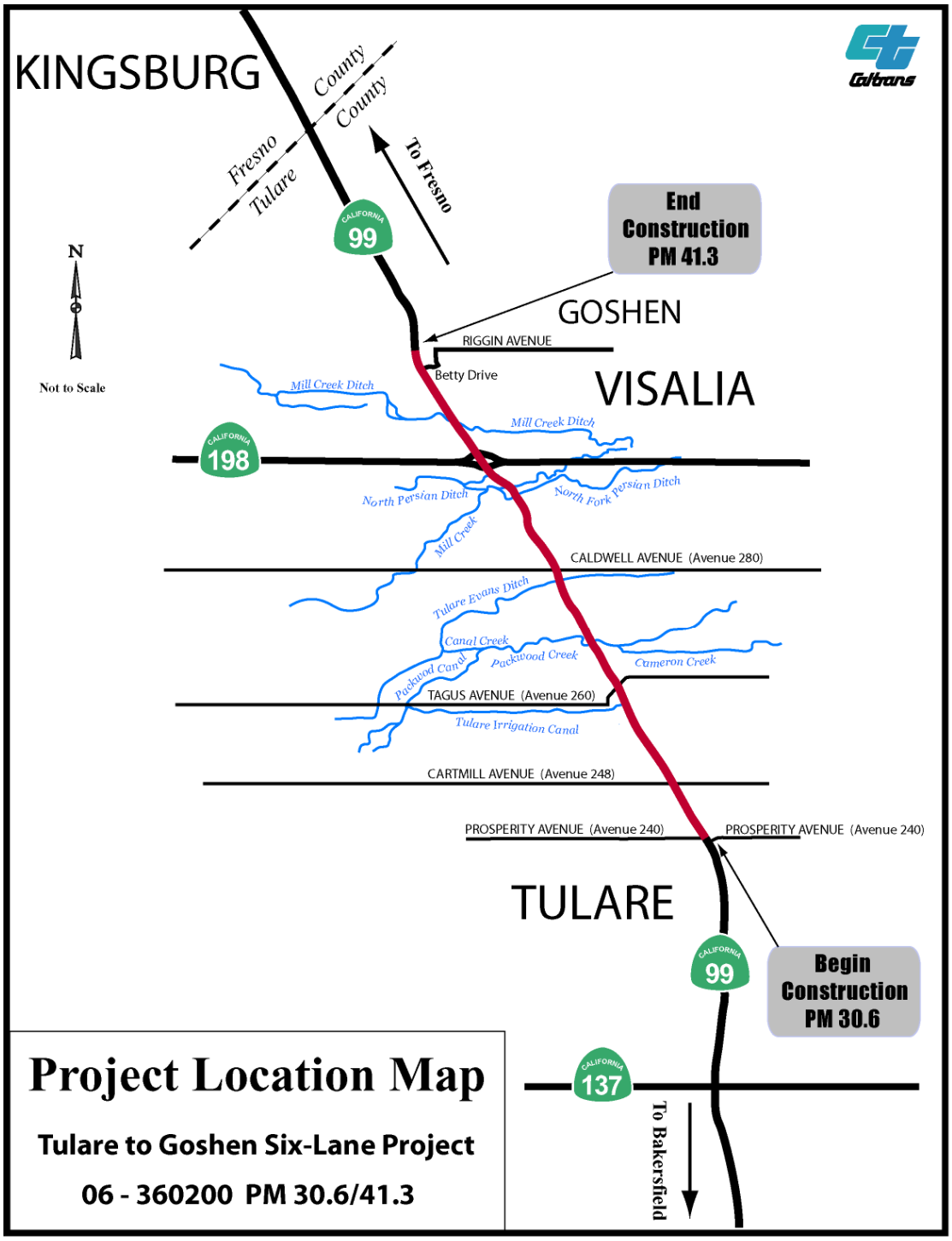


Figure 1-2 Project Location Map

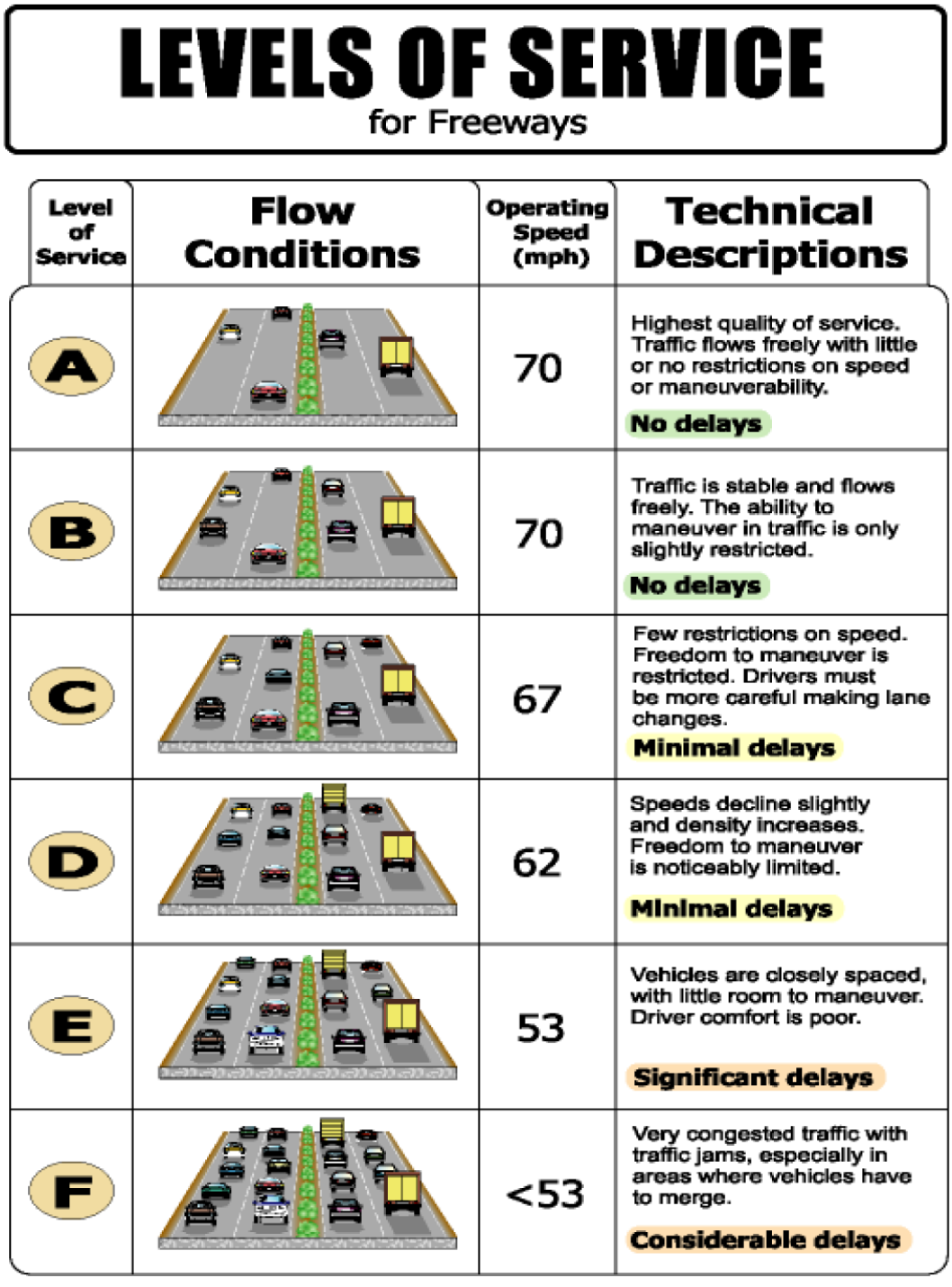


Figure 1-3 Level of Service for Freeways

Traffic volumes in the project area are expected to increase by 25 percent between 2007 and 2014 (Table 1.1) and State Route 99 is expected to deteriorate to Level of Service "E" by the year 2014 if no improvements are made. In addition, traffic volumes in the project area would increase an additional 32.5 percent between 2014 and 2034 (Table 1.1), causing the Level of Service to deteriorate to "F" by the year 2034.

Operations

Portions of the existing outside shoulder within the project limits are 8 feet wide, less than the current standard of 10 feet. The inside shoulders are not standard and range from 2 to 8 feet throughout the project, less than the current standard of 10 feet.

Structures within the project limits consist of six overcrossings, four overheads, four separations, and three bridges. All minimum vertical clearances for all overcrossings, except the Goshen pedestrian overcrossing, vary from 14.5 to 15.4 feet, less than the standard height of 16 feet, 6 inches. The horizontal clearances vary from 8 to 23 feet. On a six-lane freeway, the required minimum horizontal clearance should be equal to the standard shoulder width of 10 feet.

Stopping sight distances on vertical curves (hills) are not standard at the Prosperity Overcrossing, the Goshen Overhead, and the North Goshen Overhead. Seven off-ramps have nonstandard deceleration lengths.

Safety

The accident history for northbound lanes of this section of State Route 99 for November 2004 to October 2007 indicates that fatalities on the northbound lanes were higher than the statewide average during that time period. The accident rates in accidents per million vehicle miles are shown below in Table 1.3.

Table 1.3 State Route 99 — Tulare to Goshen Accident Data
November 1, 2004 - October 31, 2007

State Route 99 Post Miles 30.6/41.3	Actual			Average		
	Fatal	Fatal and Injury	Total*	Fatal	Fatal and Injury	Total*
Northbound	0.020	0.19	0.74	0.013	0.29	0.75
Southbound	0.010	0.18	0.49	0.013	0.29	0.75

Source: Department of Transportation Office of Traffic Engineering, Updated Accident Data Report, November 2006
**Total includes all accidents (fatal, fatal plus injury, and property damage only)*

There were 224 accidents (6-Fatal, 52-Injury, 166-Property Damage Only) that occurred along this segment of northbound State Route 99. There were 149 accidents (3-Fatal, 53-Injury, 93-Property Damage Only) that occurred along this segment of southbound State Route 99. Accident rates can be expected to increase as traffic increases to the projected volumes.

Of the 224 accidents that occurred in the northbound lanes, 124 (55 percent) involved striking an object, 37 (17 percent) were rear-end collisions, 29 (13 percent) were sideswipe collisions, 24 (11 percent) were overturn-type accidents, and 10 (4 percent) involved head-on, broadside, or other types of collisions.

1.3 Alternatives

The Tulare to Goshen Six-Lane Project proposes to convert the 10.7-mile four-lane freeway to a six-lane freeway. The project would improve traffic operations by relieving congestion, reducing delays, and reducing the number of accidents within the project limits by adding one lane in each direction.

The following section describes the proposed action and the design alternatives that were developed by a multi-disciplinary team to achieve the project purpose and need while avoiding or minimizing environmental impacts. The alternatives are:

- Alternative 1
- The No-Build Alternative

1.3.1 Alternative 1

Alternative 1 would add one northbound lane and one southbound lane, and realign a county frontage road. This alternative would construct the two new lanes in the median, except from post miles 34.4 and 37.2 where widening of the northbound lane would be constructed on the outside. Except on overcrossing structures, the proposed lanes would be the standard 12 feet wide, and all outside shoulders would be widened to a standard width of 10 feet (see Figures 1-4 and 1-5). The isolated northbound/southbound on-ramps at Avenue 256 would be closed because the standard distances between intersecting roadways is 2 miles in rural areas. The current distance between Avenue 256 and Cartmill is 1.2 miles on the south; at Tagus to the north, the current distance to Avenue 256 is 0.9 mile.

Under Alternative 1, some existing median barriers would be kept in place, and new median barrier would be constructed at narrow median areas for safety concerns. No

barriers are required from post miles 33.0 to 33.6 and from post miles 37.2 to 39.6. Table 1.4 shows the locations of thrie-beam and concrete median barriers throughout the project limits:

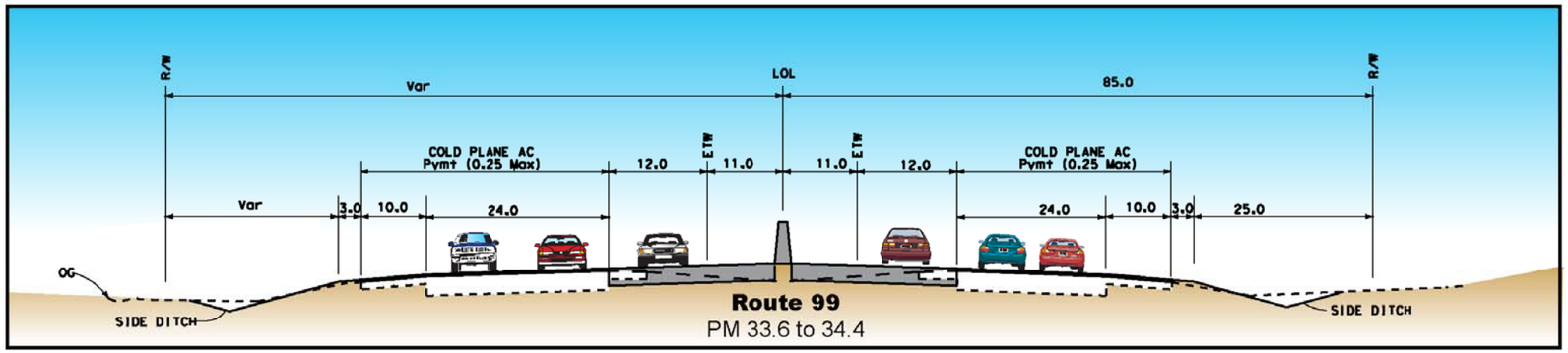
Table 1.4 Median Barrier Type and Locations

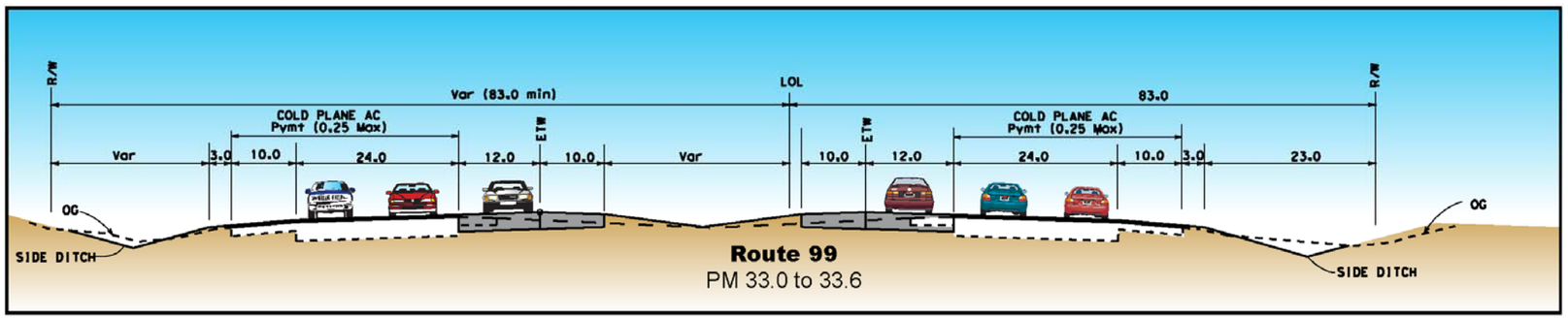
Location (post mile)	Type of Barrier	Median Width (feet)
30.6 to 33.0	Concrete	18
33.6 to 37.2	Concrete	22
39.6 to 41.3	Thrie-beam	22

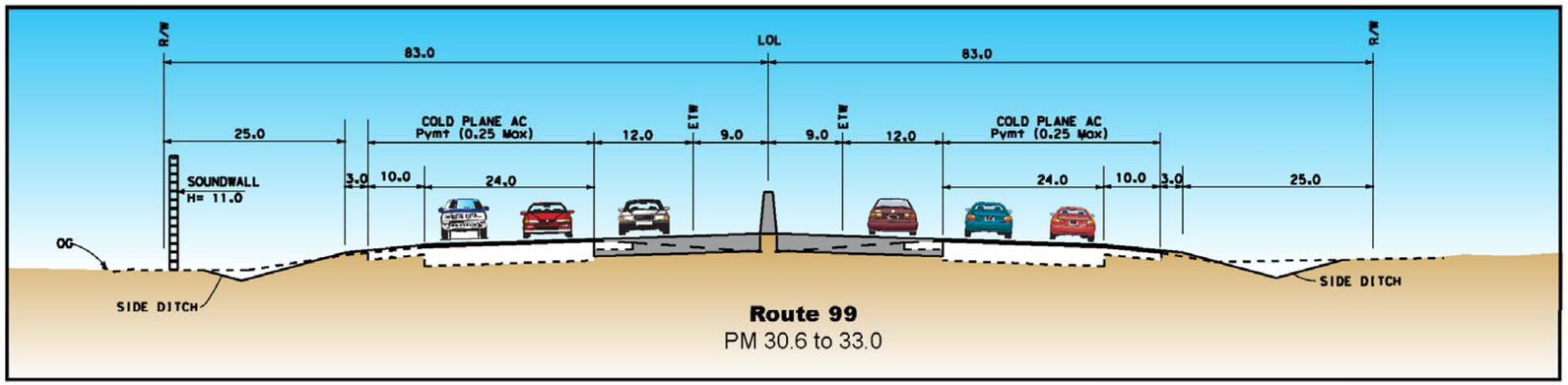
Alternative 1 would build four infiltration basins: at Cameron Creek Bridge, Tagus Overcrossing, Caldwell Overcrossing, and north of Mill Creek Ditch Bridge. Additional drainage culverts would be constructed. Existing culverts would be lengthened to accommodate the widened freeway and median. Side ditches would be placed from post miles 30.6 to 41.2.

Alternative 1 would build three soundwalls: at the New Life Church, Blain Park, and the Tulare Public Cemetery.

Table 1.5 lists the structures that would be changed under Alternative 1:





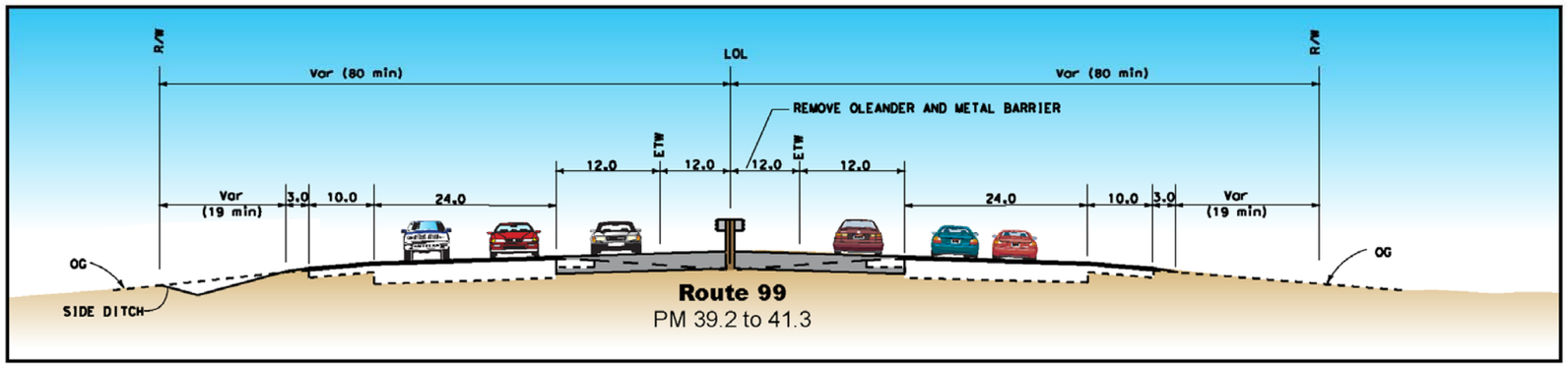


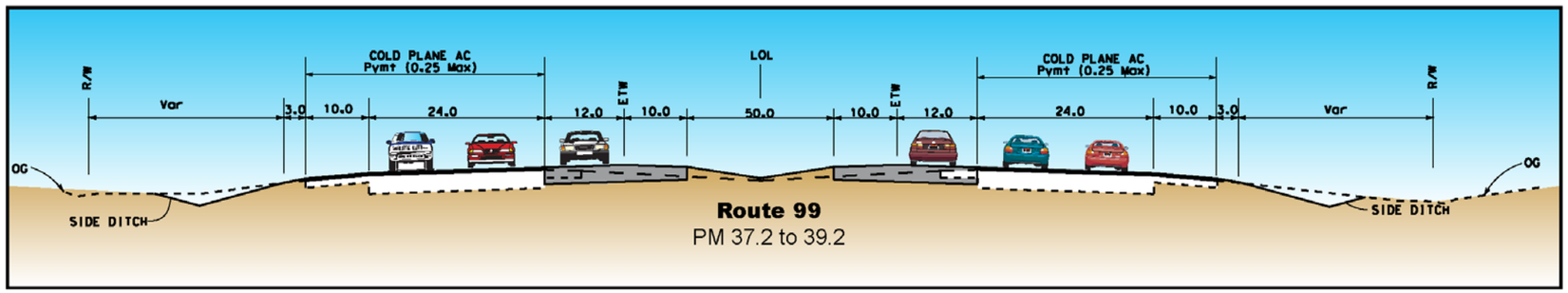
TYPICAL CROSS SECTIONS
X-1

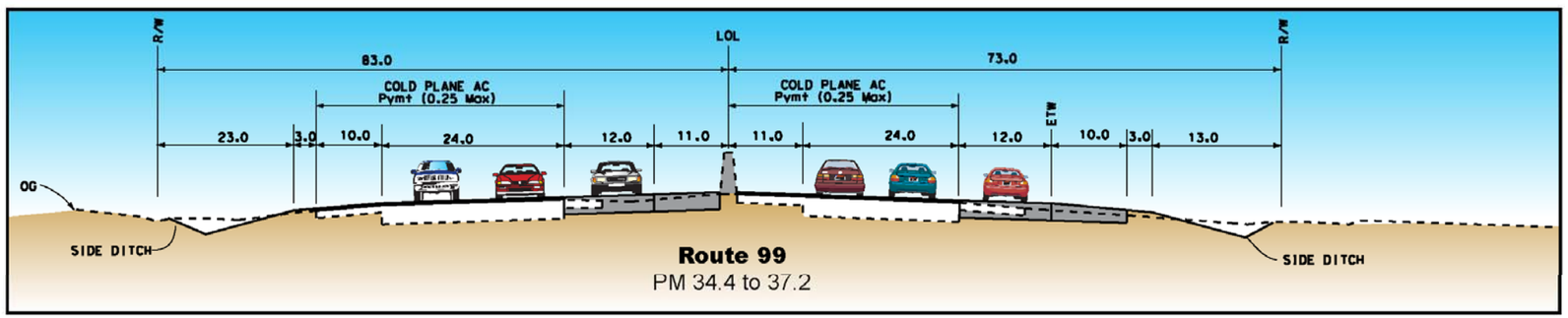
ALL DIMENSIONS ARE IN
FEET UNLESS OTHERWISE SHOWN

NO SCALE

Figure 1-4 Typical Cross Sections for Post Miles 33.0 to 34.4







ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

NO SCALE

TYPICAL CROSS SECTIONS
X-2

Figure 1-5 Typical Cross Sections for Post Miles 34.4 to 41.3

Table 1.5 Structure Changes

Structure	Change Required
Cameron Creek Bridge (J Street)	Widen
South Tagus Overcrossing	Remove onramp from J Street and replace with two-way frontage road Replace existing South Tagus Overcrossing with larger structure
Tagus Overcrossing	Replace northbound hook ramps with spread-diamond type ramps and loop ramp Realign existing frontage road at northeast quadrant to accommodate new ramps
Packwood Creek Bridge	Widen
Avenue 280 Overcrossing (Caldwell Avenue)	Realign northbound off-ramp and northbound loop on-ramp to accommodate new outside northbound lane
West Visalia Overhead	Widen left and right bridge
State Route 99/198 East Separation	Widen left and right bridge
State Route 99/198 West Separation	Widen left and right bridge
Mill Creek Bridge	Widen
Goshen Overhead	Widen left and right bridge

Various utility facilities such as aerial (distribution and transmission) electric lines, underground electric lines, aerial and underground telephone lines, gas lines, water lines, cable television, and sanitary sewer lines would be relocated.

In addition, as part of the Corridor System Management Plan for State Route 99, the following Intelligent Transportation System elements would be installed in various locations within the limits of the project: changeable message signs, closed-circuit television, transportation management systems, highway advisory radios, and ramp meters.

Transportation Systems Management strategies consist of actions that increase the efficiency of existing roads; they are actions that increase the number of vehicle trips a roadway can carry without increasing the number of through lanes. Although Transportation Systems Management measures alone could not satisfy the purpose and need of the project, such features have been incorporated into the project and are referred to as weaving lanes in the project description. See Table 1.6.

Table 1.6 Transportation Systems Management Features

Acceleration Lanes and Locations	**Length**
Northbound direction from Prosperity Avenue on-ramp	1,300 feet
Northbound direction from Avenue 280 (Caldwell Avenue) on-ramp	500 feet
Southbound direction from Avenue 280 (Caldwell Avenue) on-ramp	1,300 feet
Northbound connector from westbound State Route 198	1,300 feet
Westbound State Route 198 to southbound State Route 99 connector	1,300 feet
Eastbound State Route 198 to southbound State Route 99 connector	1,300 feet
Deceleration Lanes and Locations	
Southbound direction to Prosperity Avenue off-ramp	1,300 feet
Southbound direction to Avenue 280 (Caldwell Avenue.) off-ramp	1,300 feet
Two-Lane Exits and Locations	
Convert southbound connector to a two-lane exit to westbound/eastbound State Route 198	1,500 feet
Convert northbound connector to a two-lane exit to eastbound State Route 198	2,500 feet

Alternative 1 would cost $140.6 million ($100 million for roadway work, $14 million for structural work, and $26.6 million for right-of-way).

1.3.2 No-Build Alternative

The No-Build Alternative would keep this segment of State Route 99 in its present condition. This alternative does not meet the purpose and need for the project, and it is not consistent with the Tulare County General Plan, the City of Tulare General Plan, the Goshen Community Plan (draft), and the City of Visalia General Plan. No measures would be taken to add capacity, reduce congestion, or improve safety and operations for future development in Goshen, the City of Tulare, and the City of Visalia. Caltrans' target of Level of Service C for the 20-year horizon could not be achieved with the No-Build Alternative. Over time, this alternative would result in excessive delay, increased congestion, and an increase in accidents.

1.3.3 Alternative Selection

After the public circulation period, all comments were considered, and Caltrans selected a preferred alternative and made the final determination of the project's effect on the environment. In accordance with the California Environmental Quality Act, no unmitigable significant adverse impacts were identified, and Caltrans prepared a Mitigated Negative Declaration. Caltrans determined that this project does

not significantly affect the environment. Caltrans, as assigned by the Federal Highway Administration, issued a Finding of No Significant Impact in accordance with the National Environmental Policy Act.

After comparing and weighing the benefits and impacts of all of the feasible alternatives, and consideration of public hearing comments, Caltrans identified Alternative 1 as the preferred alternative. Refer to subsection below entitled "Comparison of Alternatives."

Comparison of Alternatives

Criteria considered by the Project Development Team to evaluate the project alternatives included the project purpose and need objectives, project costs, and potential environmental effects. See Table 1.7 for a cost comparison of alternatives.

Table 1.7 Comparison of Alternatives

Alternative	Roadway Construction Costs	Right-of-Way		Structural Work			Total Project Cost
		Acres Needed	Cost	Modify	Remove and Replace	Cost	
Alternative 1	$100 million	48.4 acres	$26.6 million	11	1	$14 million	$140.6 million
No-Build Alternative	$0	0	$0	0	0	$0	$0

Source: Draft Project Report dated June 2008

Table 1.7 shows that under Alternative 1, only one structure would be removed and replaced; 11 structures would be changed, which keeps structural work to a minimum and meets the purpose and need of the project. Alternative 1 would require 48.4 acres of right-of-way costing $26.6 million.

The No-Build Alternative would not meet the project's purpose and need to reduce congestion and improve operations and safety.

1.3.4 Identification of a Preferred Alternative

Based on environmental impacts and after consideration of public hearing comments, Caltrans selected Alternative 1 as the Preferred Alternative.

Caltrans proposes to convert the existing four-lane freeway to a six-lane freeway to meet future traffic projections. The purpose and need of this project is to 1) increase capacity, 2) improve operations, and 3) improve safety on this segment of State Route 99. All three criteria are met with the Alternative 1. To add capacity to the facility to meet existing and project traffic volumes, two lanes would be constructed mostly in the median, not to the outside. This strategy keeps future traffic toward the median, increasing safety and minimizes impacts to residential areas, businesses, and biological resources. Operations would be improved by incorporating Transportation Systems Management strategies in the form of weaving lanes. The weaving lanes would be constructed near interchanges which increases the number of vehicle trips without increasing lanes to the project.

The No-Build Alternative, was considered and rejected because it would not meet the purpose and need of the project by keeping this stretch of State Route 99 at its present condition. It did not meet the purpose and need criteria of improving capacity, improving operations, or improving safety. The No Build Alternative would result in excessive delays, increased congestion, and an increase in accidents.

1.3.5 Alternatives Considered but Eliminated From Further Discussion

During the project development process, two alternatives—Alternatives 2 and 3—were withdrawn from further consideration.

Alternative 2

Alternative 2 would add two lanes within the existing 42-foot median from the beginning of the project (post mile 30.6) to Avenue 256 (post mile 33.0). The existing lanes would be shifted to the outside to add the two lanes and 10-foot inside shoulders. Additional right-of-way would be required to change interchanges and ramps. Existing ramps at the Avenue 304 interchange would be closed to eliminate nonstandard spacing between State Route 99/198, Avenue 304, and Betty Drive interchanges in Goshen. Alternative 2 would eliminate two nonstandard weaving sections in each direction and replace those with one nearly standard weaving section.

The frontage road between Avenue 272 and Avenue 280 would be relocated or shifted to the east to provide a standard separation distance to the freeway.

Alternative 2 would widen the following structures:

- Cartmill Road Overcrossing
- West Visalia Overhead
- State Route 99/198 East Separation
- State Route 99/198 West Separation
- Mill Creek Bridge

The following structures would be removed and replaced to accommodate the proposed six-lane freeway under Alternative 2:

- Cartmill Road Overcrossing (Avenue 248)
- Tagus Overcrossing
- South Tagus Overcrossing
- Packwood Creek Bridge
- Goshen Overcrossing
- North Goshen Overhead

The cost for Alternative 2 is $169 million ($111 million for road work, $27 million for structural work, and $31 million for right-of-way). Alternative 2 was withdrawn from further consideration because it would result in excessive construction costs. The construction of Alternative 2 is also above and beyond the purpose and need of this project and inconsistent with other State Route 99 projects along the corridor.

Alternative 3

Alternative 3 proposed to build a six-lane freeway on an ultimate eight-lane right-of-way. This alternative is similar in design to Alternative 2, but extensive right-of-way acquisitions in farmland, residential, industrial, and commercial properties would be needed. The additional lanes would be constructed to the north and south sides of the alignment. All structures (five overcrossings, four overheads, four separations, and three bridges) would be removed and replaced. Interchange and frontage road system reconstruction would be required, and ramp reconfigurations would be required. Extensive coordination with the Union Pacific Railroad adjacent to the alignment would also be required.

The project cost for Alternative 3 is $175 million ($111 million road work, $27 million structural work, and $37 million for right-of-way).

Alternative 3 was withdrawn from further consideration because it would result in excessive construction costs, excessive right-of-way acquisition, and increased environmental impacts. Alternative 3 would not provide route continuity. In addition, Alternative 3 is economically impractical considering the current statewide project funding conditions.

1.4 Permits and Approvals Needed

The following permits, reviews, and approvals would be required for project construction:

Table 1.8 Permits Required

Agency	Permit/Approval	Status
U.S. Fish and Wildlife Service	Section 7 Biological Opinion for Threatened and Endangered Species	Received Biological Opinion on February 21, 2008
California Department of Fish and Game	1602 Streambed Alteration Agreement	Pending completion in the Project Specifications and Estimate phase of the project. Anticipate completion in October 2012.
U.S. Army Corps of Engineers	Section 404 Permit for filling or dredging waters of the U.S. Nationwide Permit #14	Pending completion in the Project Specifications and Estimate phase of the project. Anticipate completion in October 2012.
California Regional Water Quality Control Board	Section 401 Water Discharge Permit	Pending completion in the Project Specifications and Estimate phase of the project. Anticipate completion in October 2012.
State Water Resources Control Board	Section 402 National Pollutant Discharge Elimination Permit	Pending completion in the Project Specifications and Estimate phase of the project. Anticipate completion in October 2012.

Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

This chapter explains the impacts that the project would have on the human, physical, and biological environments in the project area. It describes the existing environment that could be affected by the project, potential impacts from each of the alternatives, and proposed avoidance, minimization, and/or mitigation measures. Any indirect impacts are included in the general impacts analysis and discussions that follow.

As part of the scoping and environmental analysis conducted for the project, the following environmental issues were considered but no adverse impacts were identified. Consequently, there is no further discussion regarding these issues in this document.

- Natural Communities – No natural communities of special concern or critical habitat exist within the Biological Study Area or adjacent lands (Biological Assessment, August 2007 and Natural Environment Study, February 2008).

- Plant Species – Caltrans prepared two biological reports for this project: a Biological Assessment was prepared in August 2007 and a Natural Environment Study was prepared in February 2008. An online U.S. Fish and Wildlife Service Species List was obtained on October 11, 2007. (See Appendix E.) Botanical surveys were performed on April 30, 2003 and August 18, 2005. No special-status plant species were observed during these surveys. The proposed project would not have an impact on regional plant populations due to the highly disturbed habitat within the project area.

- Parks and Recreation – One City of Tulare park, Blain Park, would receive abatement in the form of one soundwall. No direct or indirect impacts to Blain Park are anticipated. The proposed project would not constitute a constructive use of Blain Park. (See Appendix G for Properties Evaluated Relative to the Requirements of Section 4(f)).

- Cultural Resources – No archaeological sites were identified during the pedestrian archaeological survey. Three architectural resources were determined not eligible for the National Register of Historic Places. No historic properties (resources eligible to the National Register Historic Places) were found within the Area of Potential Effects of the undertaking; a finding of "no historic properties affected" was presented to the consulting parties and the public (Historic Property Survey Report, May 2008). The Historic Property Survey Report was received by the Department of Parks and Recreation on May 27, 2008. No correspondence has been received from the State Historic Preservation Office (part of the Department of Parks and Recreation) during the 30-day review period. As specified in the Section 106 Programmatic Agreement (Stipulation VIII.C.5.a), Caltrans assumed State Historic Preservation Office concurrence with Caltrans' determination of ineligibility of the three architectural properties evaluated for the National Register of Historic Places in the context of the undertaking. Also, State Historic Preservation Office concurrence on the effect finding of "No Historic Properties Affected" is understood. The Historic Property Survey Report was also sent to the other consulting parties during the formal 30-day comment period. These are the City of Tulare, Tulare County, and the Santa Rosa Tachi Yokuts Tribe. No comments were received from any of these consulting parties during the 30-day comment period.

  As is the case on all projects, it is Caltrans' policy is to avoid cultural resources whenever possible. If buried cultural materials were encountered during construction, it is Caltrans' policy that work stop in that area of the find until a qualified archaeologist can evaluate its nature and significance. If human remains are exposed during project activities, State Health and Safety Code Section 7050.5 states that no further disturbance would occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code 5097.98.

- Community Character and Cohesion – No impacts to Community Character and Cohesion because the proposed project would widen State Route 99 within the median. No negative impacts to communities and neighborhoods adjacent to State Route 99 are anticipated.

2.1 Human Environment

2.1.1 Land Use

2.1.1.1 Existing and Future Land Use

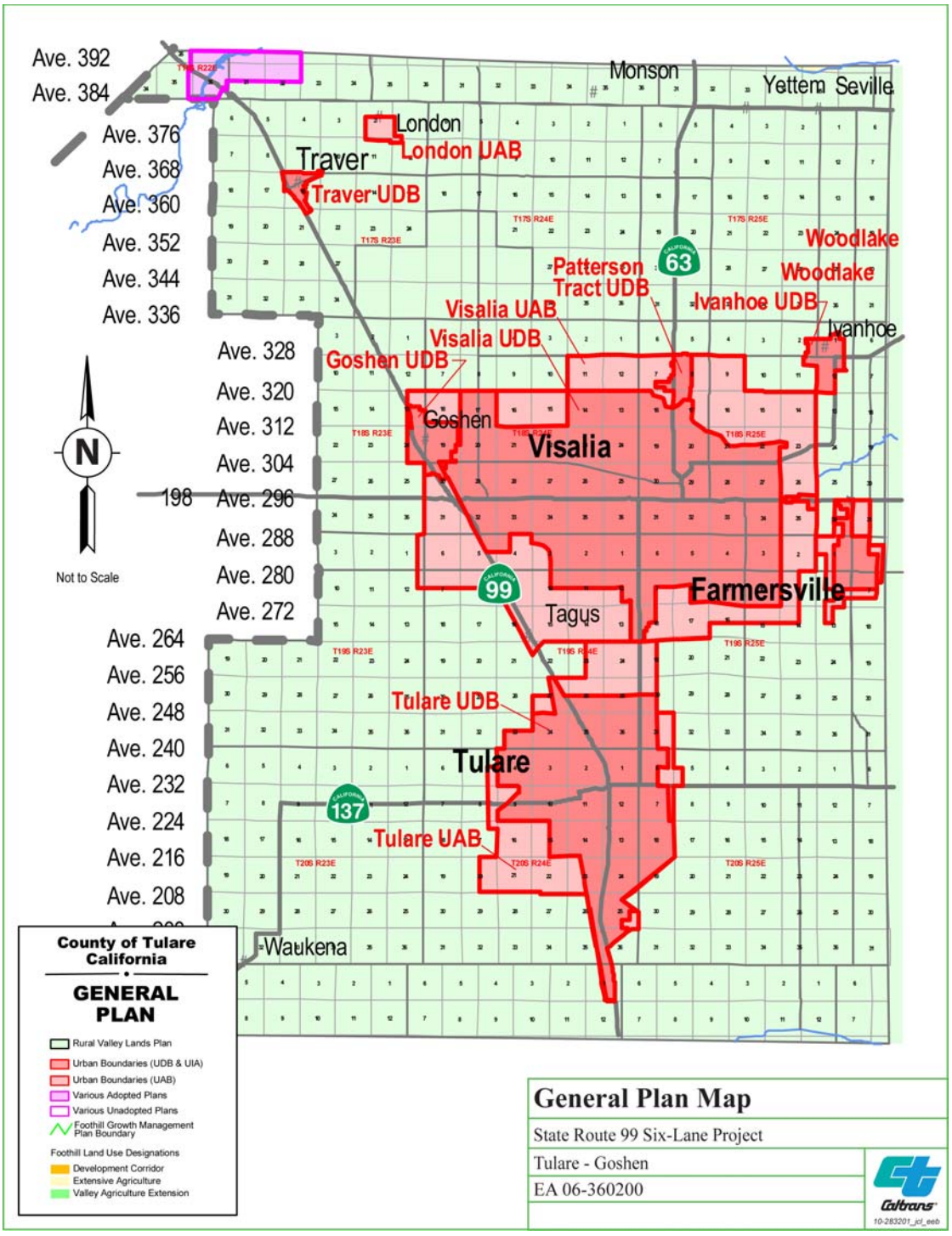
Affected Environment

The Tulare to Goshen Six-Lane Project is a 10.7-mile segment of State Route 99 beginning at Prosperity Avenue in the City of Tulare and ending at north of the North Goshen Overhead in the community of Goshen in western Tulare County. Growing, packing, and shipping of agricultural products are the dominant land use in Tulare County—it is second largest producing county in the United States.

The current land uses at the beginning of the project area, within the City of Tulare, are a mixture of residential, businesses, and industrial. The Preferred Outlets in Tulare, previously known as Horizon Outlets, is located at the south end of the project near Prosperity Avenue on the east side of the freeway. Several gas stations and restaurants are found at on-/off-ramps. A cemetery is located at the southwest corner of State Route 99 and Avenue 256. Further north, agricultural row crops and buildings are located on both sides of the alignment. The Visalia Municipal Airport is on the east side of the freeway near the west Visalia Overhead. At Goshen Avenue, industrial buildings are located adjacent to the freeway. Land uses become residential, commercial, and industrial to the north to the community of Goshen.

Urban Development Boundaries

The countywide General Plan Map (Figure 2-1) shows the existing and proposed areas for development entitled Urban Development Boundaries. Generally, Urban Boundaries are expansion boundaries around cities and unincorporated urban communities, transitional areas, or holding areas, according to the General Plan. Specifically, Urban Development Boundaries for "cities" are an officially adopted and mapped line delineating the area expected for urban growth over a 20-year period. Urban Development Boundaries, for communities like Goshen, is a line dividing land to be developed from land to be protected for agricultural, natural, or rural uses, and serves as the official planning area. Land within a community Urban Development Boundary is assumed appropriate for development and not subject to the Rural Valley Lands Plan, which establishes minimum parcel sizes for areas zoned for agriculture. An Urban Area Boundary is an officially adopted and mapped line around "incorporated cities."



Source: Tulare County General Plan

Figure 2-1 Urban Boundaries Map

According to the Draft Environmental Impact Report – Tulare County General Plan Update, December 2007, new growth would occur within the Urban Development Boundaries as opposed to less development within unincorporated areas, such as Goshen. Caltrans environmental staff contacted offices of Tulare County, the City of Tulare, and the City of Visalia for information on upcoming projects, General Plan Amendments, and General Plan Initiatives. Refer to Table 2.1 for Major Local Land Use Projects as of June 2008.

Table 2.1 Major Local Land Use Projects

Name and Location	Jurisdiction	Proposed Uses	Status
County of Tulare			
Paint Ball Park Caldwell Ave/State Route 99	County of Tulare	Paint ball park	In review
Residential Subdivision north and south of Avenue 308 in Goshen	County of Tulare	Goshen residential subdivision – 320 acres	Under construction
Fulbright – Castlewood at northeast quadrant of State Route 99/198	County of Tulare	51.6 acres commercial/ industrial subdivision	Preliminary approval
City of Tulare			
HA Development – Walmart and others at northeast corner of Cartmill Avenue/ State Route 99 Freeway sign to be located at southeast corner of Cartmill Avenue/State Route 99	City of Tulare	132 acres, 1.4 million square feet of regional retail and service (Super Wal-Mart and 50-foot-tall freeway sign	Super Wal-Mart annexation and freeway sign pending as of April 2008
Tulare Beef Harvesting and Processing Plant at Paige Avenue and Enterprise Street	City of Tulare	90 acres - 195,000 square feet for protein harvesting plant 110,000-square-foot cold storage/cogeneration plant converting animal waste to energy	Project pending

Name and Location	Jurisdiction	Proposed Uses	Status
Bud Long – Motor Sports Center to be located between Laspina Street and Turner Drive east of the Agri-Center	City of Tulare	Development of 751 acres for Tulare Motor Sports Center	Project pending as of April 2008
Development in Liberty Hill subdivision	City of Tulare	Subdivide into 4 parcels; amend General Plan on 7.24 acres from Suburban Residential to Community Commercial; rezone 7.24 acres from neighborhood commercial, conditional use permit for manufactured home park for 520 units with private streets.	Project pending
South I Street Specific Plan North and south of Paige Avenue near South I Street and State Route 99	City of Tulare	South I Street Specific Plan- 458 acres – Expansion of industrial areas for larger industrial-manufacturing users that have larger land requirement (20-40 acres); provide additional areas for smaller users (1-10 acres), take advantage of the industrial trunk sewer line on Paige Avenue and take advantage of rail access line along South I Street and State Route 99.	Project pending
Development Commercial Center east side of South K Street, between O'Neal and Walnut Avenues	City of Tulare	30,000-square-foot service commercial center	Project pending
Love's Travel Center at southeast corner of Paige Avenue and Blackstone Avenue	City of Tulare	9,400-square-foot convenience store, including McDonald's and Subway restaurants, 8-bay canopy for gasoline sales, 9-bay truck canopy for diesel sales, 3-bay truck wash, and freeway sign	Approved
Development at south of Inyo Avenue between Marin and West Streets	City of Tulare	Subdivide into 6 common area parcels – construct 20 condominiums and change zoning.	Project pending
Development south of Bella Oaks Drive, between Paseo Del Lago and Mooney Boulevard – Vista Del Loma Subdivision	City of Tulare	80-unit apartment complex	Project pending as of April 2008

Name and Location	Jurisdiction	Proposed Uses	Status
Development at Del Lago Professional Center at Leland Avenue and Hillman Street	City of Tulare	Develop 9 acres to 101,303 square feet of office complex	Approved
		Construct 5,167-square-foot medical office	Approved
		4,800-square-foot office building	Approved
		6,313-square-foot office building	Approved
		5,415-square-foot office building	Approved
		5,000-square-foot office buildings	Under construction
California Office Liquidators on South K Street between Kern Street and West Kern Avenue	City of Tulare	9,715-square-foot commercial building	Approved
Burger King at O Street and Bardsley Avenue	City of Tulare	3,049-square-foot restaurant	Approved
Development of Mini-Market at the northwest corner of Paige Avenue and Laspina Street	City of Tulare	4,988-square-foot convenience store with Subway restaurant, gasoline sales, and automatic car wash	Approved
Huckleberry's Restaurant on Cherry Court north of Prosperity Avenue	City of Tulare	3,663-square-foot restaurant with beer/wine license	Plans being checked
CVS Pharmacy at the southwest corner of Mooney Boulevard and Bardsley Avenue	City of Tulare	13,225-square-foot building	Permit ready to issue
Development on East Tulare Avenue east of State Route 99	City of Tulare	21,587-square-foot office complex	Plans under review
Commercial Center southwest corner of E Street and Prosperity Avenue	City of Tulare	48,900-square-foot commercial center on 5.2 acres with gasoline sales	Approved

Name and Location	Jurisdiction	Proposed Uses	Status
Browman Development Phase IV outlet mall north of Ultra Diamonds-Horizon Outlet Center	City of Tulare	160,547-square-foot retail space	Approved
Boot Barn, Preferred Outlet between Retherford Street and State Route 99, north of Leland Avenue	City of Tulare	11,598-square-foot retail store	Plans under review
Tulare Marketplace at southwest corner of Mooney Boulevard and Prosperity Avenue	City of Tulare	233,480-square-foot shopping center on 18 acres with Super Target as anchor.	Target opened January 07
		22,670-square-foot Tractor Supply with a 20,000-square-foot outdoor sales area.	Tractor Supply plans being checked
		4,135-square-foot Valvoline Auto-lube	Valvoline plans completed
		Bank at Mooney Boulevard and Prosperity Avenue	Bank under construction
IHOP Restaurant at Prosperity Avenue and State Route 99	City of Tulare	4,900-square-foot restaurant	Under construction
Hampton Inn at Prosperity Avenue and Merritt Avenue	City of Tulare	49,183-square-foot, 4-story, 86-room hotel	Under construction
Development between Hillman Street and State Route 99, south of Prosperity Avenue	City of Tulare	42,087-square-foot, 75-room motel 49,661-square-foot, 75-room motel	Under construction
Development at northwest corner of Blackstone Street and Bardsley Avenue	City of Tulare	2,920-square-foot mini-market 8,440-square-foot tire store	Under construction
Church addition on North Cherry Street between East Academy Avenue and East Cross Avenue	City of Tulare	Church addition - 43,571-square-foot building	Under construction
Hospital Expansion at southwest corner of Merritt Avenue and Cherry Street	City of Tulare	Hospital expansion 105,128 square feet	Project pending

Name and Location	Jurisdiction	Proposed Uses	Status
US Cold Storage Expansion at Blackstone Street and Walnut Avenue	City of Tulare	US Cold Storage expansion 251,631 square feet	Approved
City of Visalia			
Rancho Sierra	City of Visalia	114.6 acres to be subdivided into 175 single-family residential lots.	General Plan Amendment Approved
Diversified Development Group-constructed building at Kelsey Drive and Hurley Street	City of Visalia	932,242 square feet of warehousing/distribution	Approved and constructed
Midstate 99 Distribution Center – property bounded by Goshen Avenue, Plaza Drive, Ferguson Avenue, and Road 76	City of Visalia	Divide 120 acres into 12 parcels for distribution center	Tentative map valid through June 13, 2009
Vargas Annexation at northeast corner of Riggin Avenue and Plaza Drive	City of Visalia	425 acres for warehousing/ distribution	Annexation to City of Visalia approved
Plaza Business Park at east and west side of Plaza Drive between Crowley Avenue and Hurley Street	City of Visalia	Mix of 327,828-square-foot office/educational/highway service	Conditional use permit approved in April 2008

Environmental Consequences

Alternative 1 would require 48.4 acres of right-of-way for the six-lane construction. Typically, 40-foot strips of land would be acquired for the construction of weaving lanes near interchanges and infiltration basins. In or near urban areas, 22.4 acres would be acquired and would affect parcels that are vacant or are used by businesses (see Section 2.1.4.1 Relocations). In rural areas, 26 acres would be acquired primarily along the edge of parcels used for agriculture (see Section 2.1.3 Farmland). The proposed project would not affect planned land use.

Avoidance, Minimization, and/or Mitigation Measures

No mitigation measures would be necessary.

2.1.1.2 Consistency with State, Regional, and Local Plans

Affected Environment

The City of Tulare General Plan, the City of Visalia General Plan, the draft Goshen Community Plan, and the Tulare County General Plan envision that State Route 99 be expanded to six lanes with the expansion of urban development boundaries.

Tulare County General Plan

The Tulare County General Plan draft Goals and Policies Report, dated November 2006, is the "heart" of the Tulare County General Plan. This report aids decision-makers focus on the direction of the county. According to the Tulare County General Plan, the Urban Boundaries for the City of Tulare, Goshen, and Visalia, have been increased. The Tulare County General Plan states that improvements to State Route 99 would be needed for local and regional development.

City of Tulare General Plan

The City of Tulare 2030 General Plan Update draft Land Use Diagram dated May 2007 coincides with the Tulare County General Plan that envisions State Route 99 being expanded to six lanes. Urban Boundaries for the City of Tulare have been increased; the north end of the City of Tulare and the City of Visalia meet together in the Urban Boundaries Map in Figure 2-1. Regional commercial, commercial reserve, industrial reserve, service commercial, and public land uses have been proposed throughout the city and outlying areas.

City of Visalia General Plan

The City of Visalia's Urban Boundaries have been increased according to the Tulare County General Plan and the City of Visalia General Plan. In addition, the City of Visalia General Plan anticipates the widening of State Route 99 to six lanes. A Level of Service of F would be attained by the year 2020 from Caldwell Avenue to Betty Drive (Avenue 264 to Avenue 328), according to the City of Visalia's General Plan, Circulation Element Updated, dated April 2001.

Draft Goshen Community Plan

The Goshen Urban Development Boundary is part of the Tulare County General Plan draft Goals and Policies Report dated November 2006. The Urban Development Boundary Map shows the existing and proposed Urban Development Boundaries for the community of Goshen. The draft Goshen Community Plan, February 2004, is consistent with the Tulare County General Plan and is a component of the Land Use and Circulation Elements. One of the goals of the Goshen Community Plan is to

strengthen the highway commercial economic base and to improve freeway interchanges. The proposed plan designates the area along State Route 99 as commercial/industrial from westbound State Route 198 through Avenue 308. From Avenue 308 through the end of the project at post mile 41.3, the plan proposes highway commercial designation. The Goshen Community Plan states that new residential development would occur to the northwest of State Route 99. Commercial growth is expected near Betty Drive, on parcels adjacent and east of the freeway. Access to State Route 99 is a high priority at the local and state levels because of residential, industrial, highway commercial, and service commercial growth on both sides of State Route 99.

Regional Transportation Plan

This project is included in the Tulare County Association of Governments' 2007 Regional Transportation Plan and is financially constrained for highway improvements.

Federal and State Transportation Improvement Programs

The 2006 Federal Transportation Improvement Program shows this project as funded for construction within the 20-year horizon. This project is included in the 2006 State Transportation Improvement Program as a capacity-increasing project.

Environmental Consequences

No new impacts to the project areas are anticipated. This project is consistent with the Tulare County General Plan, the City of Tulare General Plan, and the draft Goshen Community Plan. The Department of Transportation is addressing the projected traffic and local development by adding capacity to the facility.

Avoidance, Minimization, and/or Mitigation Measures

No mitigation would be required.

2.1.2 Growth

Regulatory Setting

The Council on Environmental Quality regulations, which implement the National Environmental Policy Act of 1969, require evaluation of the potential environmental consequences of all proposed federal activities and programs. This provision includes a requirement to examine indirect consequences, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future. The Council on Environmental Quality regulations, 40 Code of Federal Regulations

1508.8, refer to these consequences as indirect impacts. Indirect impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

The California Environmental Quality Act also requires the analysis of a project's potential to induce growth. California Environmental Quality Act guidelines, Section 15126.2(d), require that environmental documents "…discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment…"

Affected Environment

Growth is an increase in the size and structure of a population, its economic activities, or land use.

According to the Draft Environmental Impact Report – Tulare County General Plan Update, dated December 2007, new growth would occur within the Urban Development Boundaries as opposed to unincorporated areas.

Population

The Tulare County General Plan Background Report, dated December 2007, shows a gradual increase in population in Tulare County from 2000 through 2025. Refer to Table 2.2 for Population Growth Projections. According to the Tulare County General Plan, larger population increases would occur within the more populated areas of the community of Goshen, the City of Tulare, and just to the east, the City of Visalia. According to the Department of Finance, which provides population estimates for cities and counties throughout California, the population of Tulare County grew 1.8 percent per year from 1990 to 2000. For unincorporated areas of the county only, growth has been unpredictable. The unincorporated areas of the county have increased by only 26,675 persons, or 18.1 percent since 1980. The rural community of Goshen would see approximately 800 additional persons between 2000 and 2025.

Table 2.2 Area Population Growth Projections

Area	2000	2010	2020	2025
Goshen	2,394	2,700	3,010	3,180
Tulare	43,994	54,200	69,780	79,180
Visalia	91,565	110,000	134,200	148,230
Tulare County	368,021	433,122	492,370	530,190

Source: Tulare County General Plan, Department of Finance, Census 2000, Woods & Poole, Series 2003, Projections, Mintier and Associates 2004

Community of Goshen

According to the draft Goshen Community Plan (February 2004), there are several constraints to development in Goshen. These included the lack of a full range of community services including public health facilities, State Route 99 noise levels, deteriorating housing, the Union Pacific Railroad tracks, and the Visalia Municipal Airport traffic patterns. Nevertheless, economic investments within the unincorporated community of Goshen would be expected in housing, highway commercial, and industrial uses. Most new residential development would occur to the northwest of State Route 99 away from the Visalia Municipal Airport, protected agricultural parcels, and areas where there is a lack of water and sewer lines. The draft Goshen Community Plan has designated highway commercial areas on either side of State Route 99 and Goshen anticipates commercial development on State Route 99 near the Betty Drive alignment. Industrial growth would occur in the northeast sector of Goshen according to the draft Goshen Community Plan.

City of Tulare

According to the Tulare County General Plan Background Report dated December 2007, future growth would be in designated areas within the city limits and urban development boundary. Development is extensive within the City of Tulare. Shopping, commercial services, and office space are proposed that would slow traffic flow to surrounding communities. The report listed factors that could constrain continued development in Tulare: air quality; competition for commercial and industrial development from other urban areas (mainly Visalia); local and regional efforts to preserve prime agricultural land; and traffic congestion.

City of Visalia

The four special areas of concern for Visalia, according to the 1996 City of Visalia General Plan, are the College of Sequoias, transportation, Visalia Municipal Airport, and Visalia's four redevelopment project areas (Downtown District, East Visalia Redevelopment District, Mooney Boulevard Redevelopment District, and the Central Visalia Redevelopment District). The redevelopment project areas are still a priority for Visalia, according to the Community Redevelopment Agency of the City of Visalia's Implementation Plan dated February 2005. The overall goal of these areas are to eliminate constraints to private investment and to remove physical, economic, and social blight through continued growth of industrial, commercial, infrastructure, and residential development. Future growth for the City of Visalia, according to the City of Visalia General Plan, would be guided within the city's center and "urban sprawl" would be limited.

Environmental Consequences

Pressures on growth within the project area are planned and limited to the Urban Development Boundary (refer to Figure 2-1 General Plan Map Urban Development Boundary). Accessibility to employment, shopping, or other destinations within the project area would not be changed. Most of the project area is rural, agricultural, or agricultural-related. As stated above, Visalia is growing from the center of the city, as redevelopment projects are a priority. The City of Tulare faces future growth within the city limits and urban development boundary. Economic investment focuses on office space and housing in Tulare and limitations on converting agriculture to other land uses constrains development beyond the urban development boundary.

The Tulare County General Plan states that agriculture is the economical backbone of the county. Policies within the Rural Valley Lands Plan strengthen Tulare's agricultural-protective provisions and maintain the agricultural viability of rural valley areas. The Plan contains requirements for exclusive agricultural zoning for sustained agricultural uses.

The Tulare to Goshen Six-Lane Project is not being proposed to support major new, unplanned development. The proposed project was initiated as a response to current traffic conditions and traffic forecasts based on local plans and growth projections. It would instead facilitate current planned land use within the City of Tulare, the City of Visalia, and the community of Goshen.

Avoidance, Minimization, and/or Mitigation Measures

No mitigation measures are required.

2.1.3 Farmlands/Timberlands

Regulatory Setting

The National Environmental Policy Act and the Farmland Protection Policy Act (United States Code 4201-4209; and its regulations, 7 Code of Federal Regulations Ch. VI Part 658) require federal agencies, such as the Federal Highway Administration, and Caltrans as assigned, to coordinate with the Natural Resources Conservation Service if their activities may irreversibly convert farmland (directly or indirectly) to nonagricultural use. For purposes of the Farmland Protection Policy Act, farmland includes prime farmland, unique farmland, and land of statewide or local importance.

The California Environmental Quality Act requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to deter the early conversion of agricultural and open space lands to other uses.

Affected Environment

A Farmland Conversion Impact Rating, Form 1006 was prepared and sent to the Natural Resources Conservation Service in Visalia, CA in May 2008 (refer to Appendix F). The major crops within the project area are cotton, corn, and alfalfa. No Prime and Unique Farmland is present within the project area. There are 6.6 acres of Statewide and Local Important Farmland in the project area.

Environmental Consequences

The total right-of-way required for this project is 48.4 acres. An average of 40-foot strips of farmland would be acquired for the construction of weaving lanes near the interchanges and infiltration basins. According the Natural Resource Conservation Service, 6.6 acres of the land needed for the project is considered to be Statewide and Local Important Farmland. Of this, 3.3 acres are under Williamson Act contract. In addition, approximately 26 acres of farmland that are either vacant, orchards, or used for field and seed, would also be required. A Farmland Conversion Impact Rating Form was completed in cooperation with the Natural Resource Conservation Service (Appendix F). Farmland converted for the project would be approximately 0.0069 percent of the farmland in the county. The proposed project was given 105.87 points out of a possible 260 points on the impact rating form. This is less than 160 points, which would trigger consideration of greater protection under the Farmland Protection Policy Act. Williamson Act contracts would not be affected because of the small amount converted (3.3 acres) to highway purposes from one parcel (168.8 acres) and one owner.

Avoidance, Minimization, and/or Mitigation Measures

No mitigation for farmland is required.

2.1.4 Community Impacts

2.1.4.1 Relocations

Regulatory Setting

Caltrans' Relocation Assistance Program is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and Title 49 Code of Federal Regulations, Part 24. The purpose of the Relocation Assistance Program is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. A summary of the Relocation Assistance Program is provided in Appendix C.

All relocation services and benefits are administered without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act (42 United States Code 2000d, et seq.). a copy of Caltrans' Title VI Policy Statement is provided in Appendix B.

Affected Environment

A Relocation Impact Report prepared in June 2008 provides information on all residential and non-residential impacts resulting from the construction of this project.

The Tulare to Goshen Six-Lane Project is located in the southeastern part of the San Joaquin Valley in Tulare County, California. The project area begins at Prosperity Avenue within the city of Tulare and ends within the urban area of the community of Goshen. Throughout the project limits, most land is used for agriculture. Commercial, industrial, and residential uses, as well as churches and a park fill other adjacent lands. Several gas stations and restaurants are found at off- and on-ramps.

Environmental Consequences

This project would convert a four-lane freeway to a six-lane freeway between Prosperity Avenue in the City of Tulare to the North Goshen Overhead in the community of Goshen. Two lanes would be constructed mostly in the median throughout the project limits. An average of 40 feet would be acquired at some locations for the construction of weaving lanes and infiltration basins.

A frontage road would extend J Street to Avenue 264 at the Tagus Overcrossing, where one business would be affected. The frontage road would require a 0.80-acre strip of right-of-way, affecting parking for one industrial business. Acquisition of

strips of land from three other commercial parcels are not expected to affect the daily operations of the businesses and their buildings would be kept intact. Approximately 0.7 to 3 acres would be acquired from the parcels, which range from about 10 to 29 acres. No residential properties would be acquired for this project.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans would coordinate the purchase of land adjacent to the business for additional parking. If this were not successful, the business would be entitled to relocation assistance. Displaced businesses are entitled to reimbursement for actual reasonable expenses incurred in searching for a replacement property or aid in locating suitable replacement property. Refer to Appendix C for a summary of the Relocation Assistance Program. The available relocation resources would be addressed in detail in the Final Relocation Impact Report.

Any person (individual, family, corporation, partnership, or association) who moves from real property or moves personal property from real property as a result of the acquisition of the real property, or is required to relocate as a result of a written notice from the California Department of Transportation from real property required for a transportation project, is eligible for "Relocation Assistance." All activities would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (refer to Section 2.1.1.1.) and see Appendices B and C, for more information.

2.1.4.2 Environmental Justice

Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,* signed by President Bill Clinton on February 11, 1994. This Executive Order directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. For 2008, this was $21,200 for a family of four.

All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. Caltrans' commitment to upholding the

mandates of Title VI is evidenced by its Title VI Policy Statement, signed by the Director, which can be found in Appendix C of this document.

Affected Environment

To comply with Executive Order 12898, U.S. Census demographic data was analyzed for the project area. The environmental justice assessment focused on census tracts that surround the project area. Income and ethnicity variables for the combined census tracts were compared to the project corridor, the City of Tulare, and the community of Goshen's income and ethnic composition to determine whether the census tracts had a relatively large low-income or minority population.

Most of the project area is farmland with parcels zoned as industrial, commercial, and residential. Single-family homes are found on both sides of State Route 99 within the project limits.

According to the U.S. Census, the median household income in Goshen, California is $28,301; the median household income for the census block groups located directly adjacent to State Route 99 is $32,641; the median household income in the City of Tulare is $33,637; the median household income for Tulare County is $33,983. The median household income is above the Department of Health and Human Services poverty threshold of $21,200 for a family of four.

The Census reports the racial makeup in the community of Goshen is 21.3 percent White, 73.1 percent Hispanic or Latino, and 2.1 percent Black or African American. The racial makeup in the City of Tulare is 43.8 percent White, 45.6 percent Hispanic or Latino, and 4.7 percent Black or African American. Tulare County's racial makeup is 51 percent Hispanic or Latino, 41.8 percent White, and 1.4 percent Black or African American. Table 2.3 shows the ethnicity of the populations of the Project Corridor, the City of Tulare, and Goshen.

Table 2.3 Ethnicity/Race along State Route 99 Project Corridor

	Project Corridor		City of Tulare		Goshen	
Race	**Population**	**Percent**	**Population**	**Percent**	**Population**	**Percent**
Total Population	928	100%	43,994	100%	2,394	100%
White	498	53.7%	19,276	43.8%	511	21.3%
Hispanic or Latino (of any race)	358	38.5%	20,058	45.6%	1,751	73.1%
Black or African American	36	3.9%	2,051	4.7%	51	2.1%
Asian	10	1.1%	830	1.9%	33	1.4%
Other*	2	0.2%	420	0.9%	12	0.5%
Two or more races	24	2.6%	1,359	3.1%	36	1.5%

Source: 2000 U.S. Census
**Indicates American Indian and Alaska Native, Native Hawaiian and Other Pacific Islander only*

Environmental Consequences

Because there are no readily identifiable groups or clusters of low-income residents in the project area, it is expected that the proposed project would not cause disproportionately high and adverse effects on low-income populations.

Caltrans identified beneficial and adverse impacts of the project. The beneficial effects resulting from this project would affect the entire population within the project area. Those beneficial effects are as follows:

- Improving safety and operation
- Increasing capacity would relieve traffic congestion and reduce idling time for vehicles, which would improve air quality in the project area (See Section 2.2.6)

Adverse effects from this project include the following:

- Short-term construction impacts (noise and air quality)
- Noise would increase due to projected future traffic increases (See Section 2.2.7)

Short-term construction impacts on air quality and from increased noise levels would occur throughout the entire project area and would not disproportionately affect minority populations (See Sections 2.2.6 and 2.2.7).

The projected future noise level along State Route 99, with or without the project, is predicted to be the same (See Section 2.2.7). The projected future noise level for the community of Goshen, with or without the project, is predicted to be between 68 and 75 decibels, above the noise abatement criterion (67 decibels). Alternative 1 and the

No-Build Alternative would have the same impact on the community of Goshen's minority populations (Hispanic).

To comply with the National Environmental Policy Act, a soundwall was considered for the community of Goshen to reduce projected future noise levels. To achieve the minimum 5-decibel reduction, a 19-foot-high and 1,276-foot-long noise wall would be needed. The cost of this wall would be $634,119. This is above the reasonable allowance of $576,000 for the benefited receptors (such as homes and businesses).

This area is also located within the 100-year floodplain. A traditional soundwall, as proposed, would intensify the existing flood conditions. To accommodate the floodplain, multiple overlapping soundwalls would be placed, to allow for the flow of floodwater. This would bring the costs of the noise abatement higher. Designing the wall with openings at its base would drastically reduce the effectiveness of the soundwall. Therefore, a soundwall in this location is also not feasible.

Avoidance, Minimization, and/or Mitigation Measures

Based on the above discussion and analysis, Alternative 1 would not cause disproportionately high and adverse effects on any minority or low-income populations as per Executive Order 12898 regarding environmental justice.

2.1.5 Utilities/Emergency Services

Affected Environment

Utility Relocation

Utility relocation would be required for the construction of the Tulare to Goshen Six-Lane Project. The Caltrans Right-of-Way Division would coordinate utility relocation. Utility companies such as Southern Bell Corporation, Southern California Gas, Southern California Edison, Sequoia Cablevision, AT&T Broadband, Telestar Utilities, Central Communications, Sprint Fiber Optics, and Tulare Irrigation District equipment would be affected. Utility equipment could include aerial and underground electrical lines, electrical transmission lines, telephone lines, gas lines, water lines, cable television, and sanitary sewer lines.

Emergency Services

The Tulare County Fire Department, City of Tulare Fire Department, Goshen Fire Department, and Visalia City Fire Department provide emergency services within the proposed project area. The closest fire departments within the project area are the Tulare Fire Station #25 on Foster Drive in Tulare and the Goshen Fire Station #7 on

Road 67 in Visalia. The Tulare County Sheriff's Department and the Tulare Police Department provide police service. The California Highway Patrol area offices in Fresno and Visalia provide protection within the project limits. Ambulance service is available from Tulare and Visalia.

Environmental Consequences

Utility Relocation

Acquisition of right-of-way and construction of this project would require existing utility facilities within the project limits to be relocated before construction of the proposed freeway. Aerial and underground utilities would be moved outside Caltrans proposed right-of-way. Temporary construction easements would be required. Ground disturbance would occur and minimal service interruption may occur.

Emergency Services

Lane closures are not allowed during the daytime because of high traffic and truck volume within the project limits. Nighttime work outside peak hours is anticipated for this project. Ramps and local roads may be closed within the project limits. Response times for emergencies could be delayed temporarily during construction.

Avoidance, Minimization, and/or Mitigation Measures

Utility Relocation

A detailed study would be conducted during the final design phase of this project and utility conflict mapping would be prepared.

Emergency Services

A Transportation Management Plan is required and would be prepared during the Project Specifications and Estimates phase of the project when project design is nearly complete. Transportation Management Plans are prepared for projects on the state highway system to reduce traffic delays and congestion associated with construction activities. Emergency providers would be asked to participate in developing the plan, which would describe how emergency responders would handle detours or delays. All four lanes of State Route 99 are required to be open during construction. Outside shoulders would be wider so that travel lanes could be shifted temporarily to allow ample space for median work. Detours would be constructed should ramps and local roads need to be closed temporarily for construction. Emergency services would not be affected by the construction, but response times for emergency medical and fire service could be delayed. Emergency vehicles would receive preference through any detours and lane closures.

2.1.6 Traffic and Transportation/Pedestrian and Bicycle Facilities

An Operational Analysis was prepared in August 2007 by Caltrans Traffic Engineering Division for this project.

This section of State Route 99 is a divided four-lane freeway between Prosperity Avenue in the City of Tulare and north of the North Goshen Overhead in the community of Goshen. There are no existing or planned bicycle lanes along State Route 99.

The current average daily traffic within the project limits is 54,000 vehicles. By 2014, the average daily traffic count is estimated to be 67,500 vehicles. Trucks make up 28 percent of this traffic. This section of State Route 99 is currently operating at a Level of Service D during peak-hour traffic. Refer to Figure 1-3 for a Level of Service for Freeways diagram. Caltrans has established Level of Service C as the acceptable level for State Route 99 for the 20-year planning horizon. The Route Concept Level of Service considers a Level of Service D acceptable for urban areas; the acceptable Level of Service for rural areas is C.

Environmental Consequences

The project would convert a four-lane freeway to a six-lane freeway that would add capacity to the alignment. Various structures would be widened to accommodate the new lanes. Acceleration, deceleration, and weaving lanes would improve maneuverability at various locations throughout the project limits and improve traffic operations. Two-lane off-ramps near the State Route 198 area would be constructed to improve capacity. The project would not negatively alter traffic patterns for residents and businesses.

By 2034, the average daily traffic would increase to 100,000 vehicles and, by 2044, the average daily traffic would be 122,500 vehicles. The project achieves the concept Level of Service C by 2014. Refer to Table 2.4 for Level of Service with and without the project.

Table 2.4 Level of Service With and Without the Project

Alternative	2007	2014	2034
Alternative 1	D	C	D
No-Build Alternative	D	E	F

Avoidance, Minimization, and/or Mitigation Measures

During construction the first order of work would be the reconstruction of the current outside shoulder to serve as a detour for daily traffic. The outside shoulder would be widened and paved for the detour. The construction of the median would be the next order of work. Project construction workers would be shielded from traffic by the use of temporary concrete barrier (K-rail). Traffic would be shifted to the new inside lanes while the outside lanes in the northbound direction would be constructed. At nighttime, shoulder widening would be constructed to minimize the impacts to public traffic. The vacant median could be used as a staging area for construction equipment.

A Transportation Management Plan is required and would be prepared during the Project Specifications and Estimate phase of the project when project design is nearly complete. During construction, a Traffic Management Plan would help reduce traffic delays, congestion, and accidents. Standard Caltrans construction practices include providing information on roadway conditions, using portable changeable message signs, and using lane and road closures, advance warning signs, alternate routes, reverse and alternate traffic control, and a traffic contingency plan for unforeseen circumstances and emergencies. Emergency providers would be asked to participate in developing the plan, which would describe how emergency responders would handle detours or delays. All four lanes of State Route 99 are required to be open during construction. Outside shoulders would be wider so that travel lanes could be shifted temporarily to allow ample space for median work. Detours would be constructed should ramps and local roads need to be closed temporarily for construction. Response times for emergency medical and fire service could be delayed. Emergency vehicles would receive preference through any detours and lane closures.

A Construction Zone Enhanced Enforcement Program may be appropriate during portions of this project. The program involves the continuous presence of the California Highway Patrol in construction zones to serve as a reminder to motorists to slow down and use caution when traveling through work areas. The Caltrans Construction Division would be consulted to determine if the program is warranted for this project.

The Caltrans Public Affairs Office would keep the local media informed of construction progress and information pertaining to delays, closures, and major changes in traffic patterns with information provided by the resident engineer.

2.1.7 Visual/Aesthetics

Regulatory Setting

The National Environmental Policy Act of 1969, as amended, establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* and culturally pleasing surroundings [42 United States Code 4331(b)(2)]. To further emphasize this point, the Federal Highway Administration in its implementation of the National Environmental Policy Act [23 United States Code 109(h)] directs that final decisions regarding projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

Likewise, the California Environmental Quality Act establishes that it is the policy of the state to take all action necessary to provide the people of the state "with…enjoyment of *aesthetic*, natural, scenic, and historic environmental qualities." [California Public Resources Code Section 21001(b)]

Affected Environment

A Visual Impact Assessment was prepared in January 2008 and updated in May 2008. The focus of this analysis was to determine the proposed project's impacts on views from and adjacent to State Route 99, as well as other potentially critical locations. Such possible impacts include structure and hardscape visibility, median oleander removal, tree removal, grading and erosion potential that could significantly change the existing terrain, vegetative patterns or overall aesthetic character. This assessment was performed using processes developed by the Federal Highway Administration and American Society of Landscape Architects.

The project area is located on the eastern side of the San Joaquin Valley at an approximate elevation above sea level of 288 feet. The landform is mostly flat, with the Sierra Nevada Mountains visible to the east.

Throughout most of the project area, the primary built development is the highway itself, bordered by occasional ranches and agriculture. Most of the development is located in both the northern and southern ends of the project area. This development includes a mixture of residential, businesses, and a park. There is an outlet mall located at the south end of the project on the east side of State Route 99. Along the highway there are several gas stations and restaurants, which are typically at the off-ramps/on-ramps. Vegetation consists of agricultural uses such as pastures or row

crops, grasslands, and occasional landscaping. Mature trees are highly visible in the region because of the flat terrain.

Visual Assessment Methodology

The existing landscape of the proposed project is viewed from each viewpoint and an inventory of onsite visual resources is developed. These visual resources are evaluated and rated for their aesthetic benefit and for their contribution to the existing character of the landscape and region. The existing visual resource inventory is then compared with the proposed project features, and any potential conflicts or impacts to existing visual resources are identified.

Observer Viewpoints

Field analysis identified a total of four viewing locations, or Observer Viewpoints that would best reveal the project's components and any potential visual character change. These Observer Viewpoints were selected for their effectiveness in either representing the typical visual character of the project, or showing any unique project components or affected resources:

- **Observer Viewpoint 1** – Located in the city of Tulare, looking north from the Prosperity Avenue overpass (post mile 30.60).
- **Observer Viewpoint 2** –Looking south from the Avenue 280 overpass (post mile 33.9).
- **Observer Viewpoint 3** –Looking southwest toward State Route 99 from the west side of Avenue 272 (post mile 36.25)
- **Observer Viewpoint 4** – Within the community of Goshen, looking south from the Elder Betty Drive overpass (post mile 40.77).

Visual Quality Evaluation Ratings

A Visual Quality Evaluation was conducted to assess the magnitude of the potential visual changes caused by the proposed project. The Visual Quality Evaluation compares the visual quality of both the existing and proposed conditions.

Field reviews were conducted and a numerical rating between 1 and 7 was assigned for the existing quality from each viewpoint, with 1 having the lowest value and 7 the highest. The project plans as proposed were studied and theoretically applied to the existing landscape conditions. Numerical ratings were then assigned to each of these "proposed" views. The numerical difference, if any, between the existing and proposed conditions quantified the change that may occur as a result of the proposed

project. This numerical difference was compared to the expected sensitivities of potential viewer groups to determine a level of visual impact.

The numerical rating system described above is based on evaluation criteria using three primary components identified as vividness, intactness, and unity. These three criteria are defined by the Federal Highway Administration and described as follows:

- **Vividness** is the visual power or memorability of the landscape components as they combine in striking and distinctive visual patterns.
- **Intactness** is the visual integrity of the landscape and its freedom from non-typical encroaching elements. If all of the various elements of a landscape seem to "belong" together, there will be a high level of intactness.
- **Unity** is the visual harmony of the landscape considered as a whole. Unity represents the degree to which the visual elements maintain a coherent visual pattern.

Landscape Units

To understand the visual effects of this proposed highway project, the project area's landscape is divided into landscape units. A landscape unit may be thought of as an outdoor room, perceived as a complete visual environment with certain visual characteristics that distinguish it from the next. For the purpose of this analysis, four landscape units have been defined within the project limits.

Landscape Unit A (post miles 30.6 to 31.8)
Prosperity Avenue to .40 mile south of Cartmill Road

This area of the project is located near the north end of the city of Tulare, and has oleanders lining the median. The topography is flat in this area. The land uses are mostly residential, commercial, public, and industrial. Most of the development is located on the west side of State Route 99, while the east side is open to views of the open agricultural land and the Sierra Nevada mountain range.

Landscape Unit B (post miles 31.8 to 34.3)
Cartmill Road to 0.6-mile south of Packwood Creek

This landscape unit consists mostly of agricultural land. Occasional agricultural buildings can be seen and overhead utilities parallel the highway. Agricultural uses consist of row and forage crops. The median is also lined with oleanders in this unit and the topography is flat. Large eucalyptus trees line the highway, most of them on the northbound side of State Route 99.

Landscape Unit C (post miles 34.3 to 38.0)
Packwood Creek to just south of West Visalia Overhead
This landscape unit consists mostly of agricultural land. This unit is very similar to Landscape Unit B, but does not have oleanders in the median. Occasional agricultural buildings can be seen and overhead utilities parallel the highway. Agricultural uses consist of row and forage crops. Large eucalyptus trees line the highway, most of them on the northbound side of State Route 99. The Visalia Municipal Airport is located on the east side of the alignment at the northern part of this unit.

Landscape Unit D (post miles 38.0 to 41.3)
West Visalia Overhead to the Goshen Overhead
This unit begins just south of the State Route 198/99 Interchange and ends on the west side of Goshen. Oleanders line the median and the topography is flat in this area. The land uses are mostly residential, commercial, public, and industrial. The first three-quarters of a mile of this unit is primarily used for agricultural purposes.

Viewer Groups
Viewer groups were considered for the evaluation of viewer response, those with views from the road and those with views of the road:

Viewers from the Road
This viewer group is comprised of the highway user. For viewers traveling State Route 99 through the project area, consistent views are common and include the flat valley floor and the Sierra Nevada Mountains in the background. The viewers along this segment of State Route 99 are almost exclusively in motor vehicles and include local residents, recreational travelers, tourists, work and educational commuters, and commercial vehicle operators.

The awareness of visual resources by these highway users is expected to vary with their specific activity. Tourists, which comprise a portion of viewers on State Route 99, generally have a high awareness of the visual resources around them, yet are anticipated to be less sensitive to specific changes in that environment. Generally, highway users will experience the area as a cumulative sequence of views and may not focus on specific roadway features. Local residents are the most sensitive to aesthetic issues due to their familiarity, as well as their personal investment in the area.

Viewers of the Road

This viewer is made up of all those who can see the road project or any of its components from offsite locations. In the case of this project, the number of people viewing the road from offsite locations is substantially less than those who will see the project while on the highway. There are a large number of viewers who view the highway from the frequently used access roads and outlet mall.

The existing visual quality of State Route 99 throughout the length of the project area is moderate. The view quality is due primarily to the overall rural character, the flat topography, agricultural vegetative patterns, and the visibility of manmade elements. Views along State Route 99 through the project area generally include the full range of long-distance horizon views as well as the immediate roadside environment and mid-ground.

Environmental Consequences

The Tulare to Goshen Six-Lane Project would result in a moderate change in visual resources. After construction, the visibility of built characteristics in the rural areas would be increased. The elevated highway and additional lanes would be more evident, as well as built characteristics adjacent to the alignment. The removal of 32 existing mature trees along the highway, and 5.3 linear miles of oleander shrubs would contribute to the character change.

The Visual Quality Evaluation ratings show that because the existing setting is primarily a sparsely developed landscape, the widened scale of the roadway, and vegetation loss would result in a moderate reduction of vividness, intactness, and unity. In addition, it is expected that many viewers of the project changes will have only moderate sensitivity regarding the scenic quality of the route due to long distance travel through a continuous type landscape.

The Route 99 Corridor Enhancement Master Plan states that the oleander planting in the median has come to symbolize Route 99. In addition, the oleander trees help to relieve the monotony in the long stretches of rural freeway and to shield the driver's eyes from the tiring effect of oncoming headlights. The removal of the oleanders in the median would create a loss of visual screening and an aesthetic element in the median. Overall, the visual quality of the route would be decreased

Refer to Figures 2-2, 2-3, and 2-4 for visual simulations prepared by Caltrans Landscape Architecture.

Existing

Simulation

Figure 2-2 Visual Simulation - Northbound on State Route 99 (post mile 34.6)

Existing

Simulation

Figure 2-3 Visual Simulation - Southwest view towards State Route 99 from the west side of Avenue 272 (post mile 36.25)

Existing

Simulation

Figure 2-4 Visual Simulation - South from the Elder Betty Drive overpass (post mile 40.77)

Avoidance, Minimization, and/or Mitigation Measures

Caltrans would construct aesthetic median barriers at strategic locations to compensate for the decrease in visual quality. Median barriers may be treated with color and appropriate graphic designs that complement the character of the community. Replacement planting would be funded as a separate project and would be completed within two years of the construction of the proposed project. The location of replacement plants would be determined at that time. Bridge aesthetics would include paint on bridges for visual continuity purposes. In addition, oleander shrubs and eucalyptus trees would be preserved where possible. This resource would be preserved and protected with barriers and guardrails. Soundwalls would receive plants and vines where feasible, and be aesthetically treated with anti-graffiti paint.

2.2 Physical Environment

2.2.1 Hydrology and Floodplain

Regulatory Setting

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. Requirements for compliance are outlined in 23 Code of Federal Regulations 650 Subpart A.

To comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments
- Risks of the action
- Impacts on natural and beneficial floodplain values
- Support of incompatible floodplain development
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values affected by the project.

The base floodplain is defined as "the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year." An encroachment is defined as "an action within the limits of the base floodplain."

Affected Environment

A Location Hydraulic Study/Floodplain Evaluation was prepared in December 2006. The purpose of the study was to identify and evaluate the base floodplain within the

limits of the proposed project. The report addressed the flow of water as it affects State Route 99, the base floodplain, and the surrounding area.

The project area is located on the valley floor of Tulare County. The watercourses crossing the project area originate in the Sierra Nevada Mountains and foothills and flow in a westerly or southwesterly direction across the valley floor. The main stream system draining the mountains across the project area is the Kaweah River. The Kaweah River drains into numerous tributaries including Mill Creek, Packwood Creek, Cameron Creek, and several man-made irrigation canals. Terminous Dam (Lake Kaweah), operated by the Army Corps of Engineers for flood control, has significantly reduced the Kaweah River flow.

The average annual precipitation in the City of Tulare is approximately nine inches. However, average annual precipitation at the Kaweah River watershed, where floods affecting the area originate, is estimated to be 45 inches. Eighty-five percent of annual precipitation occurs between November and April.

Tulare County is located in the San Joaquin Valley in central California. The county is divided into three geographical regions: the mountains, foothills, and valley floor. The general topography of the study area is typical of the flat plains. The downward slope of the terrain is westerly.

Designated Floodplains

The 100-year flood has been adopted by the Federal Emergency Management Agency as the base flood for floodplain management purposes. The 100-year flood has a one percent chance of being equaled or exceeded during any year. Although the recurrence interval represents the long-term average period between floods of specific magnitude, rare floods could occur at short intervals or even within the same year. Flood Insurance Studies and Flood Insurance Rate Maps were reviewed for the purposes of this study. Table 2.5 shows the following zones are designated in the project area:

Table 2.5 Floodplain Zones

Zone	Description
Zone A	Areas of 100-year flood, base flood elevations and flood hazardous factors not determined
Zone A1-A30	Areas of 100-year flood, base flood evaluations and flood hazard factors determined
Zone AE	Areas of 100-year flood, base flood elevations determined
Zone B	Areas between limits of the100-year flood; or certain areas subject to 100-year flooding with average depths less than 1 foot or where the contributing drainage area is less than one square mile, or areas protected by levees from the base flood
Zone C	Areas of minimum flooding

Environmental Consequences

Several creeks and man-made canals cross State Route 99. This means that State Route 99 crosses the floodplain at many locations.

Cameron Creek crosses State Route 99 at post mile 33.02. A reinforced concrete box conveys the flow and according to the Federal Emergency Management Agency, the channel has the capacity to convey the 100-year flood. The project does not encroach on the floodplain.

Packwood Creek crosses State Route 99 at post mile 34.92. A bridge conveys the flow and according to the Federal Emergency Management Agency, the channel has the capacity to convey the 100-year flood. The project does not encroach on the floodplain.

The proposed project would have three transverse encroachments into the floodplain. Table 2.6 below shows the approximate limits where waterways overtop State Route 99 during a flood and these locations are described following the table:

Table 2.6 Encroachment into Floodplain Locations

Waterway	Post Mile Limits	Length
Kaweah River Overflow	37.17 to 37.74	0.57 mile
Mill Creek Ditch	39.65 to 40.12	0.47 mile
Cross Creek	40.37 to 40.56	0.19 mile

The 100-year flood produced by the Kaweah River Overflow floods the area adjacent to both sides of State Route 99 between Avenue 272 and the northbound off-ramp to eastbound State Route 198. According to the Federal Emergency Management Agency, the 100-year overflow overtops approximately 0.57 mile of State Route 99 (between post miles 37.17 and 37.74). The 100-year flood produced by the Kaweah River Overflow is conveyed across State Route 99 by a 4-by-3-foot reinforced concrete box on Stokes Ditch, a 6-by-3-foot reinforced concrete box on Watson Ditch, a 4-by-3-foot reinforced concrete box on Persian Ditch, and a double 8-by-5-foot reinforced concrete box on Mill Creek. The east side of State Route 99 is designated Zone AE, and the west side of State Route 99 is designated Zone A. Zone AE refers to areas of 100-year flood, where the base flood elevations are determined. Zone A refers to areas of 100-year flood where the base flood elevations have not been determined. According to preliminary design, the widening of the highway would not affect the floodplain.

Mill Creek Ditch crosses State Route 99 at post mile 39.65. This bridge, a double 8-by-4-foot reinforced concrete box, conveys the flow. According to the Federal Emergency Management Agency, the 100-year flood may flood the northbound lanes between approximately post miles 39.26 and 39.65 and post miles 40.12 and 40.34. The Mill Creek floodplain within the project area is designated Zone A. According to preliminary design, the widening of the highway would not significantly affect the floodplain.

Cross Creek crosses State Route 99 more than three miles north of the project limits. The floodplain extends both south and north of the main crossing because the Southern Pacific Railroad and State Route 99 act as a barrier to the flow. According to the Federal Emergency Management Agency, the flow backs up on State Route 99 and eventually overtops State Route 99 south of the Goshen pedestrian overcrossing approximately between post miles 40.37 and 40.56. The Cross Creek floodplain within the project area is designated Zone A. According to preliminary design, the widening of the project would not significantly affect the floodplain.

The Tulare to Goshen Six-Lane Project would not significantly affect the hydraulics, and would not change the existing drainage patterns present in the area. The proposed project does not constitute a significant encroachment on the floodplain as defined in Title 23 Code of Federal Regulations, Section 650.105(q). It is anticipated that major improvements in the areas where State Route 99 encroaches into the floodplain would be in the median.

Avoidance, Minimization, and/or Mitigation Measures

Concrete median barrier would not be constructed in the areas above where the Kaweah River, Mill Creek Ditch, and Cross Creek overtop State Route 99. Instead of concrete barrier, thrie-beam barrier would be placed at these locations to allow floodwaters to cross State Route 99.

In addition, four basins would be constructed to filter storm water at the following locations:

- Basin #1 would be constructed within the vicinity of Cameron Creek. The volume needed would be 53,000 cubic feet.
- Basin #2 would be constructed at the Tagus Overcrossing. The volume needed would be 70,000 cubic feet.
- Basin #3 would be constructed within the vicinity of the Caldwell Overcrossing. The volume needed would be 92,000 cubic feet.
- Basin #4 would be constructed within the vicinity of Goshen, west of State Route 99 and north of Mill Creek Ditch. The volume needed would be 250,000 cubic feet.

Equalizer cross culverts would be required to provide drainage relief in the median. Grading and drainage modifications would be required to accommodate the proposed lane additions. Side ditches throughout the project area would be regraded and new ditches would be constructed. New drainage inlets may be required in the elevated sections of the freeway to drain water from the median.

2.2.2 Water Quality and Storm Water Runoff

Regulatory Setting

Section 401 of the Clean Water Act requires a water quality certification from the State Water Resources Control Board or from a Regional Water Quality Control Board when the project requires a Clean Water Act Section 404 permit. Section 404 of the Clean Water Act requires a permit from the U.S. Army Corps of Engineers to dredge or fill material into waters of the U.S.

Along with Section 401 of the Clean Water Act, Section 402 of the Clean Water Act establishes the National Pollutant Discharge Elimination System permit for the discharge of any pollutant into waters of the United States. The federal Environmental Protection Agency has delegated administration of the National Pollutant Discharge Elimination System program to the State Water Resources

Control Board and nine Regional Water Quality Control Boards. The State Water Resources Control Board and Regional Water Quality Control Boards also regulate other waste discharges to lands within California through the issuance of waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

The State Water Resources Control Board has developed and issued a statewide National Pollutant Discharge Elimination System permit to regulate storm water discharges from all Caltrans activities on its highways and facilities. Caltrans construction projects are regulated under the statewide permit, and projects performed by other entities on Caltrans right-of-way (encroachments) are regulated by the State Water Resources Control Board's Statewide General Construction Permit. All construction projects over 1 acre require a Storm Water Pollution Prevention Plan to be prepared and implemented during construction. Caltrans activities of less than 1 acre require a Water Pollution Control Program.

Affected Environment

Caltrans Central Regional Environmental Engineering Branch prepared a Water Quality Assessment Report on August 7, 2007.

Surface Water

The project area is in the South Valley floor Hydraulic Unit 558.10 of the Kaweah Delta area where surface water drains to the Pacific Ocean through the San Francisco Bay. Most of the waterways originate in the Lower Kaweah River and/or the Saint John's River. Several water bodies are within the project limits, the most important being Packwood Creek and Mill Creek. Other water bodies include irrigation facilities such as the Persian Ditch, Rockyford Ditch, and Evans Ditch, along with some unnamed irrigation canals. The potential beneficial uses for surface water are for agricultural irrigation, industrial power, recreation, fish habitat, and wildlife habitat.

Section 303 of the Clean Water Act requires identification of surface waters that have been impaired. Currently, the water bodies within the project limits are not included in the 303(d) list as being impaired.

Additional ditches and seasonal waterways were observed during field visits. Several of these watercourses contained extraction pumps and wells just west of the project for use in the orchards and agricultural fields. In each case, the pumps appeared to be

outside the project footprint; however, care would be needed during construction to maintain their integrity.

Groundwater

Groundwater generally follows the structural surface of the underlying bedrock in the western portion of the project site and flows toward the San Joaquin Valley floor to the west. Groundwater quality is better in the lower zone of the Tulare Formation. The Tulare Formation is comprised of water-bearing sands and gravels of moderate permeability. Locally, groundwater is of moderate to good quality.

Environmental Consequences

Potential sources of water pollution associated with this project include storm water runoff containing sediment from soil erosion, petroleum and wear products from motor vehicle operation, landscaping chemicals, and hazardous materials spilled in highway accident. These materials could potentially be transported offsite with rainfall runoff.

Sediment from soil erosion can be transported to surface waters. Vegetation on the ground can naturally filtrate and capture sediment. When land is cleared or disturbed during construction, the rate of erosion increases, and the benefit of filtration is diminished or lost. Bridge structures, road pavements, and drainage ditches may also be damaged and weakened by erosion.

Oil and grease are leaked onto road surfaces from motor vehicles, spilled at fueling stations, and discarded directly onto pavement or into storm sewers instead of being taken to recycling stations. Improperly designed storm water treatment and drainage systems transport these pollutants directly to surface waters.

Heavy metals originate from “natural” sources such as minerals in rocks, vegetation, sand, and salt. Other sources of heavy metals include motor vehicle exhaust, worn tires, and engine parts, brake linings, weathered paint, and rust. Heavy metals are toxic to aquatic life and can potentially contaminate groundwater.

Best Management Practices during construction and for the life of the project are expected to provide the required mitigation measures. The following section discusses short- and long-term water quality impacts for this project:

Short-Term Water Quality Impacts

Construction activities such as demolition, excavation, grading, and filling of soil are short-term impacts. Dust would be generated and concentrations of suspended solids, dissolved solids, and organic pollutants (from agricultural sources) in storm water runoff could increase during construction. Construction site and highway storm water runoff would be routed away from the highway through culverts and other water control devices approved in the Statewide Stormwater Management Plan.

Potential short-term water quality impacts are anticipated to be minor and are not expected to threaten beneficial uses such as agricultural irrigation, industrial power, fish and wildlife habitat, and recreation.

Long-Term Water Quality Impacts

Implementation of this project is not anticipated to have significant long-term water quality impacts. Potential long-term impacts from the construction of the two new bridges are expected to include changes in the local stream hydraulics and erosion patterns. Construction activities from this project are not expected to affect groundwater recharge, discharge, flow conditions, or groundwater quality.

The project would involve construction work that has the potential to affect the water quality of Cameron Creek, Packwood Creek, and Mill Creek in the short-term; however, surface water quality impacts would be minor. No long-term impacts are anticipated. No groundwater impacts are expected from the project.

The major potential surface water quality impacts are 1) increases in sediments, turbidity, and total dissolved solids, and 2) toxicity due to chemical substances originating from construction activities.

By incorporating proper and accepted engineering practices and Best Management Practices, the proposed project is not expected to produce substantial impacts to water quality during or after highway construction.

The following permits would be required for this project:

- Clean Water Act Section 401 issued by the Regional Water Quality Control Board
- National Pollutant District Elimination System Section 402 permit issued by the State Waste Resources Control Board
- Clean Water Act Section 404 issued by the U.S. Army Corps of Engineers

- Fish and Game Code 1602 Streambed Alteration Agreement issued by the California Department of Fish and Game

Avoidance, Minimization, and/or Mitigation Measures

Projects involving less than one acre of disturbed soil require implementation of the Caltrans Water Pollution Control Program. When disturbed acreage is one acre or more, Caltrans' National Pollutant Discharge Elimination System permit requires coordination with the Regional Water Quality Control Board. This project is expected to disturb more than one acre of soil and requires the following:

- Notification of Construction is to be submitted to the appropriate Regional Water Quality Control Board at least 30 days prior to the start of construction.
- A Storm Water Pollution Prevention Plan is to be prepared prior to and implemented during construction to the satisfaction of the Caltrans Resident Engineer.
- A Notice of Construction Completion is to be submitted to the Regional Water Quality Control Board upon completion of the construction and stabilization of the site. A project would be considered complete when it meets the criteria of Caltrans' National Pollutant Discharge Elimination System permit for final stabilization.

2.2.3 Geology/Soils/Seismic/Topography

Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects "outstanding examples of major geological features." Topographic and geologic features are also protected under the California Environmental Quality Act.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Caltrans' Office of Earthquake Engineering is responsible for assessing the seismic hazard for Caltrans projects. The current policy is to use the anticipated Maximum Credible Earthquake from young faults in and near California. The Maximum Credible Earthquake is defined as the largest earthquake that can be expected to occur on a fault over a particular period of time.

Affected Environment

A District Preliminary Geotechnical Report was prepared in August 2007 and updated in April 2008. The physical setting of the project site and the surrounding area was reviewed to provide climate, topography and drainage, man-made and natural features, geology, and seismicity characteristics to aid in preliminary project design and construction planning.

The project area is located in the Great Valley geomorphic province of California on the western side of the Sierra Nevada Mountain Range. The flat terrain is typical for the valley region. Most of the localized drainage is generally trending to the west. The California Department of Conservation, Division of Mines and Geology Geologic Map of California, Fresno Sheet, 1991 was used to determine the geologic formations at the project location. The project location is in an area of sedimentary deposits formed during the Quaternary Period of the Cenozoic Era, between 10 thousand and 1.6 million years ago.

According to the bridge files, the soil generally encountered along the project limits consists of loose to very dense silt, sand, clayey sand, and silty sand. It is assumed the vicinity of the proposed improvements has similar soil conditions.

The ground water depths range from approximately 70 feet near the State Route 99/198 East Separation Bridge to within approximately five feet of the ground surface at the Mill Creek culvert. Shallow groundwater should be expected along the alignment in areas that are adjacent to creeks and drainage ditches. Groundwater conditions will vary according to variations in rainfall, well pumping, and construction activities.

The California Seismic Hazard Map, dated 1996, was reviewed. The map indicates that the controlling fault is the Coast Ranges-Sierran Block fault, located approximately 41 miles west of the project location. The fault is expected to be capable of producing a Maximum Credible Earthquake of magnitude 7.0.

Environmental Consequences

The quality of the foundation material (soil) is unknown and further investigations are necessary as described under Avoidance, Minimization, and/or Mitigation Measures below.

For most of the proposed project, the median is not level with the adjacent lanes. The east side of the highway from post miles 34.4 to 37.2 is not level with adjacent

highway lanes. As such, a small amount of fill (less than 3 feet) would be needed to bring it up to the level of the existing highway. All fills would be placed according to Standard Specifications.

The soil descriptions and estimated infiltration rates are based on the existing boring logs for the adjacent bridges. The Caltrans Storm Water Quality Handbook, Project Planning and Design Guide was used for the typical infiltration rates given for the soil types expected at the basin locations:

- The Cameron Basin, located near the South Tagus Overcrossing, consists of silty sand, silt, and clayey silt. Storm Water Quality Handbook guidelines estimate an infiltration rate of 0.25 inch per hour would be used.
- The Tagus Basin, located near the Tagus Overcrossing, consists of medium grained silty and clayey sand. Storm Water Quality Handbook guidelines estimate an infiltration rate of 1.0 inch per hour would be used.
- The Caldwell Basin, located near the Avenue 280 Overcrossing, consists of fine to medium grained silty sand. Storm Water Quality Handbook guidelines estimate an infiltration rate of 1.0 inch per hour would be used.
- The Goshen Basin, located on the west side of State Route 99 between Mill Creek Ditch and Avenue 304, consists of loose to medium dense, fine-grained sand with silt. Storm Water Quality Handbook guidelines estimate an infiltration rate of 1.0 inch per hour would be used.
- Based on the existing boring logs for the bridges near the site of the proposed soundwalls, it appears that the soundwalls may be constructed using spread footings. The ground surface is assumed to be relatively flat on both sides of the soundwalls. The height of the New Life Church soundwall, Segment 1, is anticipated to be 11 feet; therefore, the width of the spread footing of 5 feet, 9 inches would be used for a 12-foot-tall soundwall.

Soil conditions encountered during future subsurface investigation in support of the Geotechnical Design Report may differ from the soil conditions described in the existing boring logs. As such, adjustments may be made to the foundation types for the soundwalls and the infiltration rates for the basins.

Settlement resulting from fill placement would be expected to be minor. A settlement period has not been recommended.

Avoidance, Minimization, and/or Mitigation Measures

A subsurface exploration and testing program would be employed during the Project Specifications and Estimate phase of the project. Future investigation work would include geotechnical drilling, sampling, laboratory testing, measuring of infiltration rates, and data analyses for two soundwalls and four infiltration basins in support of the Geotechnical Design Report. Structures would be designed to seismic standards.

Depending on the moisture content of the selected borrow material and the time of the year, it may be necessary to aerate or add moisture to the fill to facilitate proper compaction.

2.2.4 Paleontology

Regulatory Setting

Paleontology is the study of life in past geologic time based on fossil plants and animals. A number of federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized or funded projects (such as the Antiquities Act of 1906 [16 USC 431-433], Federal-Aid Highway Act of 1935 [20 USC 78]). Under California law, paleontological resources are protected by the California Environmental Quality Act, the California Administrative Code, Title 14, Section 4306 et seq., and Public Resources Code Section 5097.5.

Affected Environment

A Paleontological Identification Report was prepared in September 2007. Caltrans staff reviewed the proposed improvements for this project with respect to potential paleontology resources. A preliminary evaluation included research including the Department of Geology Paleontological Sensitivity Mapping Project Database at California State University, Fresno; geological maps; and geological and paleontological literature.

The Tulare to Goshen Six-Lane Project is located in the central part of the San Joaquin Valley. The project area is underlain by Quaternary sedimentary deposits are generally ranked as low sensitivity because of the low probability of encountering fossils in the upper few feet. However, these deposits do contain numerous vertebrate fossil localities in Tulare County

Environmental Consequences

The project involves excavation to construct four infiltration basins at the vicinities of Cameron Creek, Tagus Overcrossing, Caldwell Overcrossing, and Mill Creek Ditch. The volume needed ranges from 52,972 to 250,000 cubic feet. Structural work could include excavation as well. Earth-moving activities associated with the construction of these infiltration basins could result in the disturbance or loss of fossil sites and important fossil remains, associated fossil specimen data, and corresponding geologic and geographic locality data.

Based on assessment of previous projects, Caltrans has determined that project excavation may affect sensitive paleontological resources. Other Caltrans projects in the region with excavation into Quaternary sediments have encountered sensitive fossils at depths of 5 to 8 feet.

Avoidance, Minimization, and/or Mitigation Measures

A Paleontological Evaluation Report and a Preliminary Paleontological Mitigation Plan would be prepared for this project. A qualified principal paleontologist (Master of Science or Doctorate in paleontology) or a geologist familiar with paleontological procedures and techniques would prepare a detailed plan before the start of construction.

Implementation of the Paleontological Mitigation Plan would be in compliance with the following:

- Caltrans paleontological mitigation guidelines
- The Antiquities Act of 1906 standards for mitigation of construction-related impacts on paleontological resources and for a museum's acceptance of a mitigation program fossil collection.

The following measures would be conducted to implement the Paleontological Mitigation Plan:

- The qualified principal paleontologist would be present at pre-grading meetings to talk with grading and excavation contractors.
- As excavations get underway, the principal paleontologist would conduct an employee environmental awareness training session for all persons involved in earth moving for the project.

- A paleontological monitor, under the direction of the qualified principal paleontologist, would be onsite to inspect cuts for fossils at all times during original grading involving sensitive geologic formations.
- If fossils were discovered, the paleontologist (or paleontological monitor) would recover them. Construction work in these areas would be stopped or diverted to allow recovery of fossil remains in a timely manner.
- Bulk sediment samples would be recovered from fossiliferous horizons and processed for microvertebrate remains as determined necessary by the principal paleontologist.

2.2.5 Hazardous Waste or Materials

Regulatory Setting

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health, and land use.

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 and the Comprehensive Environmental Response, Compensation and Liability Act of 1980. The purpose of the Comprehensive Environmental Response, Compensation and Liability Act, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. The Resource Conservation and Recovery Act provides for "cradle to grave" regulation of hazardous wastes. Other federal laws include the following:

- Community Environmental Response Facilitation Act of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety & Health Act
- Atomic Energy Act
- Toxic Substances Control Act
- Federal Insecticide, Fungicide, and Rodenticide Act

In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976 and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

Affected Environment

To determine whether there were any potential sources of hazardous waste within the project limits, Caltrans performed Initial Site Assessments on July 18, 2007, March 14, 2008, and April 8, 2008, and an Aerially Deposited Lead Study in March 2003. A Preliminary Site Investigation for Asbestos-Containing Materials was prepared on April 24, 2008. Field investigations were conducted throughout the project limits in September and October 2007, January 2008, and March 2008. In addition to these studies, Caltrans records, the Leaking Underground Storage Tank Information System database, the Environmental Protection Agency list, and the Department of Toxic Substances Control Cortese List were reviewed. Caltrans identified the following potential hazardous waste concerns:

- Aerially deposited lead
- Asbestos-containing material within bridge structures
- Contaminants within the Union Pacific Railroad right-of-way

Aerially Deposited Lead

The purpose of the Aerially Deposited Lead Study was to evaluate the presence and concentrations of aerially deposited lead within the project area. The results of the investigation indicated whether aerially deposited lead in the soil exceeds the regulatory threshold outlined in Title 22, California Code of Regulations.

Asbestos-Containing Materials

Historically, asbestos has been used as an insulator and fire retardant. Asbestos-containing materials have been found in bridge structures in the form of railing shims, sheet packing, and bearing shim materials. Shims are a thick, sometimes tapered piece of wood, metal, or stone, which fills and levels space. The Initial Site Assessment prepared in July 2007 recommended a Preliminary Site Investigation for

potential asbestos-containing materials because various structures would be modified or replaced for this project. This Preliminary Site Investigation was completed.

Heavy Metals and Petroleum Hydrocarbons

Most of project area parallels the Union Pacific Railroad. Typical contamination around railroad tracks includes degreasing solvents, polycyclic aromatic hydrocarbons from railroad ties, polychlorinated biphenols from engines and electrical equipment, and some heavy metals. Since most new locomotives use diesel fuel, diesel range organics may be a common contaminant of the surface and subsurface soil.

Environmental Consequences

Aerially Deposited Lead

The Aerially Deposited Lead Study found lead within the unpaved areas within the highway right-of-way. Levels of lead found range from 2.5 to 480 milligrams per kilogram. These concentrations do not exceed regulatory threshold limits. Excavated material would not require special disposal and can be reused without restriction.

Asbestos-Containing Materials

Asbestos-containing material was not present in any of the structures tested.

Heavy Metals and Petroleum Hydrocarbons

Upon permission received from the Union Pacific Railroad, a separate investigation would be conducted to determine the presence of heavy metals, polychlorinated biphenols and petroleum hydrocarbons along the railroad right-of-way. Results of the investigation would be used to ensure there has not been a release of hazardous concentrations of said contaminants, and worker safety would not be compromised during construction. Refer to Chapter 3 for coordination with Union Pacific Railroad.

No other locations within the project area are expected to contain heavy metal or petroleum hydrocarbons.

Avoidance, Minimization, and/or Mitigation Measures

Aerially Deposited Lead

No mitigation is required.

Asbestos Containing Materials

No mitigation is required.

Heavy Metals and Petroleum Hydrocarbons

Mitigation measures would be identified and incorporated into the project if necessary.

2.2.6 Air Quality

Regulatory Setting

The Clean Air Act, as amended in 1990, is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act of 1988. These laws set standards for the concentration of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards. Standards have been established for six criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), lead (Pb), and sulfur dioxide (SO_2).

Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation cannot fund, authorize, or approve federal actions to support programs or projects that are not first found to conform to the State Implementation Plan for achieving the goals of the Clean Air Act requirements. Conformity with the Clean Air Act takes place on two levels—first, at the regional level and second, at the project level. The proposed project must conform at both levels to be approved.

Regional level conformity in California is concerned with how well the region is meeting the standards set for carbon monoxide, nitrogen dioxide, ozone, and particulate matter. California is in attainment for the other criteria pollutants. At the regional level, Regional Transportation Plans are developed that include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the Regional Transportation Plan, an air quality model is run to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that attainment requirements of the Clean Air Act are met. If the conformity analysis is successful, the regional planning organization, such as the Tulare County Association of Governments for Tulare County) and the appropriate federal agencies, such as the Federal Highway Administration, make the determination that the Regional Transportation Plan is in conformity with the State Implementation Plan for achieving the goals of the Clean Air Act. Otherwise, the projects in the Regional Transportation Plan must be modified until conformity is attained. If the design and scope of the proposed

transportation project are the same as described in the Regional Transportation Plan, then the proposed project is deemed to meet regional conformity requirements for purposes of the project-level analysis.

Conformity at the project-level also requires "hot spot" analysis if an area is in "nonattainment" or "maintenance" for carbon monoxide (CO) and/or particulate matter. A region is a "nonattainment" area if one or more monitoring stations in the region fail to attain the relevant standard. Areas that were previously designated as non-attainment areas but have recently met the standard are called "maintenance" areas. "Hot spot" analysis is essentially the same, for technical purposes, as carbon monoxide or particulate matter analysis performed for National Environmental Policy Act and California Environmental Quality Act purposes. Conformity does include some specific standards for projects that require a hot spot analysis. In general, projects must not cause the carbon monoxide standard to be violated, and in "nonattainment" areas, the project must not cause any increase in the number and severity of violations. If a known carbon monoxide or particulate matter violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

Affected Environment

An Air Quality Study Report was prepared for this project in May 2007.

This project is located in the San Joaquin Valley Unified Air Pollution Control District. The most important influence over the weather pattern of the San Joaquin Valley is the semi-permanent subtropical high-pressure cell referred to as the "Pacific High." During the summertime, the Pacific High is positioned off the coast of northern California, diverting ocean-driven storms to the north. For this reason, the summer months are virtually rainless. During the winter, the Pacific High moves southward, allowing storms to pass through the San Joaquin Valley. Almost all of the precipitation expected during a given year occurs from December through April.

During the summer, the predominant surface winds are out of the northwest. Air enters the valley through the Carquinez Strait near Sacramento and flows southward and down through the Tehachapi Mountains. Wind speeds are generally highest during the spring and lightest in fall and winter. The relatively cool air flowing through the Carquinez Strait is warmed on its journey south through the valley. As it reaches the south end of the valley, the average high temperature during the summer is nearly 100 degrees Fahrenheit. Relative humidity during the summer is quite low,

causing large diurnal temperature variations. Evening temperatures during the summer often drop into the upper 60s.

In winter, the average high temperatures reach into the mid-50s, and the average low temperatures drop to the mid-30s. In addition, another high-pressure cell, known as the "Great Basin High," develops east of the Sierra Nevada mountain range during winter. When this cell is weak, a layer of cool, damp air becomes trapped in the basin, and extensive fog results. In San Joaquin Valley, heavy fog occurs on an average of 20 days per year, with December and January having the most frequent fog.

Environmental Consequences

Regional Air Quality Conformity

The proposed project is fully funded and is in the 2007 Tulare County Regional Transportation Plan, which was found to conform by Tulare County Association of Governments on May 21, 2007. The Federal Highway Administration and the Federal Transit Authority adopted the air quality conformity finding on June 29, 2007. The project is also included in the Tulare County Association of Governments' 2007 Regional Transportation Improvement Program. The Tulare County Association of Governments' Regional Transportation Improvement Program was found to conform by the Federal Highway Administration and the Federal Transit Authority on June 29, 2007. The design concept and scope of the proposed project is consistent with the project description in the 2007 Tulare County Regional Transportation Plan, the 2007 Regional Transportation Improvement Program, and the assumptions in the Tulare County Association of Governments' regional emissions analysis.

Project Level Conformity

For federal standards, Tulare County is considered attainment/unclassified with respect to carbon monoxide and non-attainment with respect to particulate matter and ozone.

For state standards, Tulare County is considered in attainment with respect to carbon monoxide and non-attainment with respect to particulate matter and ozone. Refer to Table 2.7 for Federal and State Ambient Air Quality Standards.

Table 2.7 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	State Standard	State Attainment Status	Federal Standard	Federal Attainment Status	Health and Atmospheric Effects	Typical Sources
Ozone (O_3)[a]	1 hour 8 hours	0.09 ppm 0.070 ppm	Non-attainment\ Non-attainment\	–[b] 0.08 ppm	Non-attainment\ Non-attainment\	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include a number of known toxic air contaminants.	Low-altitude ozone is almost entirely formed from reactive organic gases (ROG) and nitrogen oxides (NO_x) in the presence of sunlight and heat. Major sources include motor vehicles and other mobile sources, solvent evaporation, and industrial and other combustion processes. Biologically produced ROG may also contribute.
Carbon Monoxide (CO)	1 hour 8 hours 8 hours (Lake Tahoe)	20 ppm 9.0 ppm[c] 6 ppm	Non-attainment\ Non-attainment\	35 ppm 9 ppm –	Attainment-unclassified	Asphyxiant. CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.
Respirable Particulate Matter (PM10)[a]	24 hours Annual	50 µg/m^3 20 µg/m^3	Attainment-unclassified	150 µg/m^3 –	Non-attainment	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many aerosol and solid compounds are part of PM10.	Dust- and fume-producing industrial and agricultural operations; combustion smoke; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources (wind-blown dust, ocean spray).
Fine Particulate Matter (PM2.5)[a]	24 hours Annual	– 12 µg/m^3	Non-attainment	35 µg/m^3 15 µg/m^3	Non-attainment	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter –	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical (including photochemical) reactions

Pollutant	Averaging Time	State Standard	State Attainment Status	Federal Standard	Federal Attainment Status	Health and Atmospheric Effects	Typical Sources
						considered a toxic air contaminant – is in the PM2.5 size range. Many aerosol and solid compounds are part of PM2.5.	involving other pollutants including NO_x, sulfur oxides (SO_x), ammonia, and ROG.
Nitrogen Dioxide (NO_2)	1 hour Annual	0.25 ppm –	Attainment	– 0.053 ppm	Attainment/unclassified	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain.	Motor vehicles and other mobile sources; refineries; industrial operations.
Sulfur Dioxide (SO_2)	1 hour 3 hours 24 hours Annual	0.25 ppm – 0.04 ppm –	No State Standard	– 0.5 ppm 0.14 ppm 0.030 ppm	No Federal Standard	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing.
Lead (Pb)[d]	Monthly Quarterly	1.5 µg/m^3 –	Attianment	– 1.5 µg/m^3	Attainment	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also considered a toxic air contaminant.	Primary: lead-based industrial process like batter production and smelters. Past: lead paint, leaded gasoline. Moderate to high levels of aerially deposited lead from gasoline may still be present in soils along major roads, and can be a problem if large amounts of soil are disturbed.

Sources: California Air Resources Board Ambient Air Quality Standards chart, 05/17/2006 (http://www.arb.ca.gov/aqs/aaqs2.pdf). U.S. Environmental Protection Agency and California Air Resources Board air toxics websites, 05/17/2006

Notes: ppm = parts per million; µg/m^3 = micrograms per cubic meter

[a] Annual PM10 National Ambient Air Quality Standard revoked October 2006; was 50 µg/m^3. 24-hr. PM2.5 National Ambient Air Quality Standard tightened October 2006; was 65 µg/m^3.

[b] 12/22/2006 Federal court decision may affect applicability of Federal 1-hour ozone standard. Prior to 6/2005, the 1-hour standard was 0.12 ppm. Case is still in litigation.

[c] Rounding to an integer value is not allowed for the State 8-hour CO standard. A violation occurs at or above 9.05 ppm.

[d] The Air Resources Board has identified lead, vinyl chloride, and the particulate matter fraction of diesel exhaust as toxic air contaminants. Diesel exhaust particulate matter is part of PM10 and, in larger proportion, PM2.5. Both the Air Resources Board and U.S. Environmental Protection Agency have identified various organic compounds that are precursors to ozone and PM2.5 as toxic air contaminants. There is no threshold level of exposure for adverse health effect determined for toxic air contaminants, and control measures may apply at ambient concentrations below any criteria levels specified for these pollutants or the general categories of pollutants to which they belong.6

Ozone

The project is located in an ozone non-attainment area. Ozone is not emitted directly into the air, but is formed by a photochemical reaction in the atmosphere. Ozone is a regional pollutant and that makes site or project specific analysis not possible at this time using current tools. The U.S. Environmental Protection Agency has not provided Hot Spot analysis guidelines and approved modeling tools; therefore, a Hot Spot analysis for ozone cannot be performed at this time.

Carbon Monoxide

The project is located in an attainment/unclassified area for the federal carbon monoxide standard. According to the December 1997 Caltrans Project Level Carbon Monoxide Protocol, this project would not worsen air quality. This project is satisfactory and no further analysis is needed because this project does not result in higher carbon monoxide concentrations than those existing within the region.

Particulate Matter (PM_{10} and $PM_{2.5}$)

This project is in the San Joaquin Valley PM_{10} and $PM_{2.5}$ non-attainment area. According to the Environmental Protection Agency Transportation Conformity Guidance, PM_{10} and $PM_{2.5}$ hot-spot analysis is required for "Projects of Air Quality Concern" in non-attainment areas (40 Code of Federal Regulations 93.123(b)(1)). Projects that are exempt or are not Projects of Air Quality concern do not require hot-spot analysis.

The project does not meet the criteria of an exempt project under 40 Code of Federal Regulations 93.126. Caltrans, as Project Sponsor, has determined that the project does meet the criteria for Projects of Air Quality Concern.

The Environmental Protection Agency's final rule, 40 Code of Federal Regulations 93.123(b)(1) defines Projects of Air Quality Concern as:

- New or expanded highway projects with greater than 125,000 Annual Average Daily Traffic and 8 percent or more of such Annual Average Daily Traffic is diesel truck traffic;
- Projects affecting intersections that are at a Level of Service D, E, or F, or will become a Level of Service D, E, or F;
- New or expanded highway projects that will significantly increase the amount of diesel truck traffic.
- Expanded bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location; and

- Projects in or affecting locations, areas, or categories of sites that are identified in the $PM_{2.5}$ and PM_{10} applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

Of these five types of Projects of Air Quality Concern, the first one is potentially applicable to this project. Although the horizon year Annual Average Daily Traffic, at 101,230, is below the 125,000 threshold, the diesel truck traffic is 21 percent, therefore causing this project to be considered a Project of Air Quality Concern.

Particulate Matter Hot Spot Analysis

The PM_{10} and $PM_{2.5}$ Hot Spot analysis was presented to the Model Coordination Committee for Interagency Consultation as a Project of Air Quality Concern on May 3, 2007. The Federal Highway Administration concurred with the assumptions and analyses on May 7, 2007. However, the U.S. Environmental Protection Agency had comments regarding tables in the Hot Spot Analysis. The Department of Transportation staff made the suggested changes and clarifications and the Hot Spot analysis was re-submitted for review on June 8, 2007. On July 12, 2007, the U.S. Environmental Protection Agency concurred that the revised document could proceed with no further comments.

Qualitative Evaluation Method Used

The $PM_{2.5}$ hot-spot analysis would rely on air quality data from air pollution monitors located at or near the proposed project location. Direct emissions considered are from tailpipe and brake and tire wear. The hot-spot analysis would not consider $PM_{2.5}$ re-entrained road dust emissions, since there has been no finding of significance made by the U.S. Environmental Protection Agency or the California Air Resources Board. The hot-spot analysis would also not consider emissions from construction activities because such emissions are temporary as defined in 40 Code of Federal Regulations 93.123(c)(5). The emissions for the proposed project were examined for opening year 2011, 2021, and 2031.

Qualitative Evaluation Results

The project is in a federal PM_{10} non-attainment area that has recently been reclassified to attainment, but the existing requirements for non-attainment areas are still in place. This project requires a qualitative PM_{10} hot-spot analysis under 40 Code of Federal Regulations 93.123(b)(1)(i).

The monitoring station closest to the project area—the North Church Street station in Tulare County—is approximately six miles east of the project area. Data from this monitoring station indicated that two days exceeded the national standards for $PM_{2.5}$ in 2005. No days exceeded the national standards for PM_{10} during the 2004 through 2006 period. Refer to Table 2.8.

Table 2.8 Number of Days Exceeding National Annual Standards for Particulate Matter North Church Street

Monitoring Station	North Church Street in Visalia, CA	
Year	$PM_{2.5}$	PM_{10}
2004	0	0
2005	2	0
2006	0	0

Source: California Air Resources Board

Other monitoring sites, either operated by the Air Resources Board or the San Joaquin Valley Air Pollution Control District, located in Kern, Kings, Tulare, and Fresno counties were considered for comparison for a monitor located near a comparable road (preferably State Route 99) with similar Average Annual Daily Traffic and truck percentages.

The monitoring station found with the most similar situation was the Clovis, California - North Villa Avenue monitor. The closest interchange to the North Villa Avenue monitor was the State Route 99/Herndon interchange that had a 2005 Average Annual Daily Traffic of 61,000 and total truck traffic of 24 percent as opposed to the 53,000 Average Annual Daily Traffic and 21 percent truck traffic at the Church Street, Visalia monitor. This monitoring station and traffic situation was still only moderately similar and is located 37 miles northeast of the project boundaries.

At the Clovis – North Villa Avenue monitor, there were two days that exceeded the $PM_{2.5}$ standard in 2005 and one day that exceeded the standard in 2006. No days exceeded the national standards for PM_{10} during the 2004 through 2006 period. Refer to Table 2.9.

Table 2.9 Number of Days Exceeding National Annual Standards for Particulate Matter North Villa Avenue

Monitoring Station	North Villa Avenue in Clovis, CA	
Year	$PM_{2.5}$	PM_{10}
2004	0	0
2005	2	0
2006	1	0

Source: California Air Resources Board

A comparison of the build and no-build alternatives indicates that the build alternative would improve State Route 99 Level of Service within the project area by decreasing congestion, the potential for accidents, and idling time for diesel trucks, while maintaining air quality. Vehicle miles traveled would be the same for the build and no-build alternatives.

For the reasons described above, no new or worsening PM 10 or PM 2.5 violations of any standard are anticipated. Therefore, the build and no-build alternatives are considered conforming projects and under the PM 10 and PM 2.5 conformity hot-spot regulations.

Caltrans circulated a public notice of availability of the Project Conformity Analysis between August 7, 2008 and September 8, 2008. The notice also appeared in the *Visalia Times-Delta* and *Tulare Advance-Register* on August 7, 2008 and August 21, 2008, and in *El Sol* on August 15, 2008. No comments from the public were received.

On September 11, 2008, Caltrans requested that the Federal Highway Administration issue a project-level conformity determination for PM 10 and PM 2.5 for the project. Caltrans forwarded the conformity analysis that showed that the hot-spot analysis requirements listed in 40 Code of Federal Regulations 93.116 and 123 were met. On October 14, 2008, the Federal Highway Administration issued a project-level conformity determination for PM 10 and PM 2.5. According to FHWA, Caltrans' analyses demonstrated that the project would not create any new violations of the standards or increase the severity or number of existing violations.

Mobile Source Air Toxics

Mobile Source Air Toxics are a subset of the 188 air toxics defined in the Clean Air Act. They are federally regulated under 40 Code of Federal Regulations 1502.22 by the U.S. Environmental Protection Agency. Mobile Source Air Toxics are 21

compounds emitted from highway vehicles and non-road equipment. There are six main toxics, including diesel exhaust, benzene, and formaldehyde.

The Federal Highway Administration has developed a tiered approach for analyzing Mobile Source Air Toxics. The Federal Highway Administration has identified three levels of analysis depending on specific project circumstances:

- No analysis for exempt projects with no potential for meaningful mobile source air toxic effects;
- Qualitative analysis for projects with low potential Mobile Source Air Toxic effects; or
- Quantitative analysis to differentiate alternatives for projects with higher potential for Mobile Source Air Toxic effects.

Projects in the category of exempt projects or projects with no meaningful potential Mobile Source Air Toxics effects include the following:

- Projects qualifying as a categorical exclusion under 23 Code of Federal Regulations 771.117(c);
- Projects exempt under the Clean Air Act conformity rule under 40 Code of Federal Regulations 93.126; or
- Other projects with no meaningful impacts on traffic volumes or vehicle mix.

Based on Federal Highway Administration guidance, the proposed project is considered to be a "Project with No Meaningful Potential Effects" because it has less than 140,000 Annual Average Daily Traffic in the design year, and it widens an 11-mile segment of State Route 99, which would relieve congestion and improve traffic flow. This would ultimately reduce emissions of volatile organic compound-based Mobile Source Air Toxics. The project would not significantly increase vehicle miles traveled.

Construction

During construction, the proposed project would generate air pollutants. The temporary exhaust from construction equipment contains hydrocarbons, oxides of nitrogen, carbon monoxide, suspended particulate matter, and odors. However, the largest percentage of pollutants would be windblown dust generated during demolition, excavation, grading, hauling, and various other construction activities. The impacts of these activities would vary daily as construction progresses. Dust and

odors at some residences very close to the right-of-way could cause occasional annoyance and complaints.

Avoidance, Minimization, and/or Mitigation Measures

Most of the construction impacts to air quality are short-term in duration and, therefore, would not result in adverse or long-term conditions. Implementation of the following measures would reduce any air quality impacts resulting from construction activities:

- The construction contractor would comply with Caltrans' Standard Specifications Section 7-1.01F and Section 10 of Caltrans' Standard Specifications (1999). Section 7, "Legal Relations and Responsibility," addresses the contractor's responsibility on many items of concern, such as air pollution; protection of lakes, streams, reservoirs, and other water bodies; use of pesticides; safety; sanitation; convenience of the public; and damage or injury to any person or property as a result of any construction operation. Section 10 is directed at controlling dust.
- Apply water or dust palliative to the site and equipment as frequently as necessary to control fugitive dust emissions.
- Wash trucks off as they leave the right-of-way as necessary to control fugitive dust emissions.
- Properly tune and maintain construction equipment and vehicles. Use low sulfur fuel in all construction equipment as provided in California Code of Regulations Title 17, Section 93114.
- Develop a special dust control plan documenting sprinkling, temporary paving, speed limits, and expedited revegetation of disturbed slopes as needed to minimize construction impacts to existing communities.
- Locate equipment and materials storage sites as far away from residential and park uses as practical. Keep construction areas clean and orderly.
- To the extent feasible, establish Environmentally Sensitive Areas for sensitive air receptors within which construction activities involving extended idling of diesel equipment would be prohibited.
- Use track-out reduction measures such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic.
- Cover all transported loads of soils and wet materials prior to transport, or provide adequate freeboard (space from the top of the material to the top of the truck) to reduce PM10 and deposits of particulate during transportation.

- Remove dust and mud that are deposited on paved, public roads due to construction activity and traffic to decrease particulate matter.
- To the extent feasible, route and schedule construction traffic to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.
- Install mulch or plant vegetation as soon as practical after grading to reduce windblown particulate in the area.

2.2.7 Noise and Vibration

Regulatory Setting

The National Environmental Policy Act of 1969 and the California Environmental Quality Act provide the broad basis for analyzing and abating the effects of highway traffic noise. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between the National Environmental Policy Act and the California Environmental Quality Act.

California Environmental Quality Act

The California Environmental Quality Act requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under the California Environmental Quality Act, then the act dictates that mitigation measures must be incorporated into the project unless such measures are not feasible.

National Environmental Policy Act and 23 Code of Federal Regulations 772

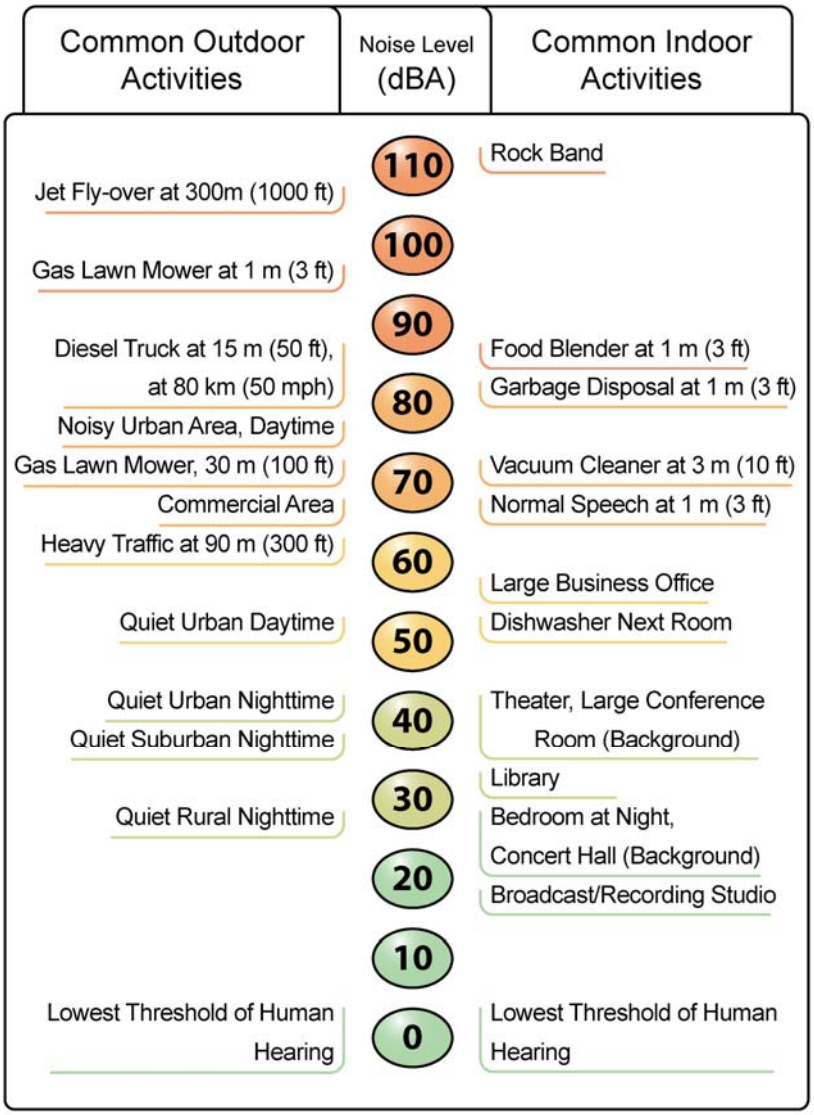
For highway transportation projects with Federal Highway Administration involvement, (and Caltrans, as assigned), the Federal-Aid Highway Act of 1970 and the associated implementing regulations (23 Code of Federal Regulations 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations contain noise abatement criteria that are used to determine when a noise impact would occur. The noise abatement criteria differ depending on the type of land use under analysis. For example, the criterion for residences (67 decibels) is lower than the criterion for commercial areas (72 decibels). The following table lists the noise abatement criteria for use in the National Environmental Policy Act and 23 Code of Federal Regulations 772 analyses and Figure 2-5 shows the noise levels of typical activities.

Table 2.10 Activity Categories and Noise Abatement Criteria

Activity Category	Noise Abatement Criteria, A-weighted Noise Level, Leq(h)	Description of Activities
A	57 Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose
B	67 Exterior	Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals
C	72 Exterior	Developed lands, properties, or activities not included in Categories A or B above
D	--	Undeveloped lands
E	52 Interior	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums

Source: Caltrans Traffic Noise Analysis Manual, 1998
A-weighted decibels are adjusted to approximate the way humans perceive sound. Leq(h) is the steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual time-varying levels over one hour.

Figure 2-5 Typical Noise Levels



In accordance with Caltrans' *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, August 2006*, a noise impact occurs when the future noise level with the project results in a substantial increase in noise level (defined as a 12-decibel or more increase) or when the future noise level with the project approaches or exceeds the noise abatement criteria. Approaching the noise abatement criteria is defined as coming within 1 decibel of the criteria.

If it is determined that the project would have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be

reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

Caltrans' *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. A minimum 5-decibel reduction in the future noise level must be achieved for an abatement measure to be considered feasible. Other considerations include topography, access requirements, other noise sources, and safety considerations. The reasonableness determination is basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include residents' acceptance, the absolute noise level, build versus existing noise, environmental impacts of abatement, public and local agencies input, newly constructed development versus development pre-dating 1978, and the cost per benefited residence.

Affected Environment

It has been determined that the Tulare to Goshen Six-Lane Project is a Type I project, meaning that this project has the potential to increase noise levels at adjacent receivers, such as homes and businesses. Therefore, a Noise Study Report was prepared in February 2008 in accordance with the Caltrans Traffic Noise Analysis Protocol. A Noise Abatement Decision Report was prepared in February 2008.

The Noise Study Report was divided into three segments:

- Segment 1 - Prosperity Avenue to Cartmill Avenue
- Segment 2 - Cartmill Avenue to State Route 198
- Segment 3 - State Route 198 to North Goshen Overhead

Current land uses within the project area are agricultural, commercial, residential, and rural residential. Segment 1 is comprised of a shopping mall, a park, two churches, and residences. Eleven receivers were identified in this segment. Segment 2 contains a cemetery, agricultural lands, and industrial/commercial properties, including the Togas Inn; 24 receivers were identified in this segment. Seventeen receivers were identified in Segment 3 where there are residential and commercial properties. Refer to Figure 2.6 for segments and proposed soundwall locations.

Environmental Consequences under the National Environmental Policy Act

In accordance with Caltrans Traffic Noise Analysis Protocol, a noise impact occurs when the future noise level at an affected receiver approaches or exceeds the Noise Abatement Criteria. Caltrans measured existing noise levels at several receivers during the highest traffic noise hour. Thirty-two receivers have been identified as approaching or exceeding the Noise Abatement Criteria by the year 2034. Tables 2.11, 2.12, and 2.13 show the existing and post-project peak-hour noise levels for this project.

Table 2.11 Segment 1 – Prosperity Avenue to Cartmill Avenue Existing and Post-Project Peak-Hour Noise Levels

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)			Reasonable and Feasible
					11-foot Wall	13-foot Wall	15-foot Wall	
1. Quality Inn, 1010 E. Prosperity Avenue	68	**72**	**72**	Yes				no/yes
2. New Life Church, 1820 North Gem Street	70	**74**	**74**	Yes	69	68	67	yes/yes
3. Blain Park, "M" Street and Garfield Avenue	68	**73**	**73**	Yes	68	67	66	yes/yes
4. Bethel Church, 2516 North "M" Street	67	**71**	**71**	Yes				no/yes
5. Residence, 746 Kirk Court	65	**69**	**69**	Yes				no/yes
6. Residence, 582 East Washington Avenue	65	**70**	**70**	Yes				no/yes
7. Residence, 598 East Washington Avenue	66	**68**	**68**	Yes				no/yes
8. McDonald's/Casa Del Rey Apartments	60	64	64	No				
9. Outlet Shopping Center-1 (Delivery Area)	72	**74**	**74**	Yes	Not applicable for commercial property			
10. Outlet Shopping Center-2 (Customer Area)	57	66	66	No				
11. Residence, 482 Congressional Court	64	**68**	**68**	Yes				no/no

Note: Bold numerals indicate noise level approaches or exceeds the Noise Abatement criteria.

Table 2.11 shows that nine receivers in Segment 1 are predicted to exceed the Noise Abatement Criteria by the year 2034. Two of those nine receivers are commercial establishments. Noise abatement is not recommended at these locations.

Soundwalls must be considered, however, for the remaining seven receivers, which include two churches, a park, and residential properties.

Table 2.12 Segment 2 – Cartmill Avenue to State Route 198
Existing and Post-Project Peak-Hour Noise Levels

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)			Reasonable and Feasible
					10-foot Wall	12-foot Wall	14-foot Wall	
1. Magic Touch RV, 3567 Oaks Street	71	70	70	No				
2. Tulare Cemetery, 900 E. Kern Avenue	70	**72**	**72**	Yes	67	66	65	yes/yes
3. Christy Company, 9700 Avenue 256	71	**71**	**71**	Yes	Not applicable for commercial property			
4. 9360 Avenue 264	63	62	62	No				
5. Warehouse/ Equipment Storage (near Tagus)	65	65	65	No				
6. Togas Inn/Pool Area 26442 N Highway 99	67	**66**	**66**	Yes				no/no
7. 26591 Highway 99	67	**66**	**66**	Yes				no/no
8. Business north of Togas Inn	66	64	64	No				
9. Office and Equipment Storage, 8742 Avenue 272	66	66	66	No				
10. Residence 27446A Highway 99	74	**73**	**73**	Yes				no/yes
11. Residence 27446B Highway 99	74	**73**	**73**	Yes				no/yes
12. Dodson Bros Roofing 27448A Highway 99	74	**73**	**73**	Yes	Not applicable for commercial property			
13. Residence 27448B Highway 99	75	**73**	**73**	Yes				no/yes
14. Residence 27450 Highway 99	73	**72**	**72**	Yes				no/yes
15. Residence 27590 Highway 99	73	**72**	**72**	Yes				no/yes
16. Motel 27598 Highway 99	73	**72**	**72**	Yes	Not applicable for commercial property			
17. Shell Gas Station at Caldwell Avenue	71	70	70	No				
18. Residence at Caldwell Avenue, southwest corner	60	59	59	No				
19. Business Office at Caldwell Avenue, southwest corner	64	63	63	No				
20. Fruit Stand at Caldwell Ave, northeast corner	62	61	61	No				

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)			Reasonable and Feasible
					10-foot Wall	12-foot Wall	14-foot Wall	
21. Valley Oak Society for the Prevention of Cruelty to Animals	71	70	70	No				
22. Offices near Society for the Prevention of Cruelty to Animals	66	65	65	No				
23. Farm Residence Near State Route 198/99 (west side)	68	**68**	**68**	Yes				no/no
24. SBC Field Office Near State Route198/99 (east side)	72	**71**	**71**	Yes	Not applicable for commercial property			

Note: Bold numerals indicate noise level approaches or exceeds the Noise Abatement criteria.

As shown in Table 2.12, 13 receivers in Segment 2 currently exceed the Noise Abatement Criteria and/or will exceed the Noise Abatement Criteria in the year 2034. Four of those 13 receivers are commercial establishments and noise abatement is not recommended at these locations. The remaining nine receivers have been identified as a cemetery, a motel, and residential properties where soundwalls must be considered.

Table 2.13 Segment 3 – State Route 198 to North Goshen Overhead Existing and Post-Project Peak-Hour Noise Levels

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)			Reasonable and Feasible
					14-foot Wall	16-foot Wall	19-foot Wall	
1. Commercial 30199 Bradham Drive	66	70	70	No	Not applicable for commercial property			
2. Commercial 2216 W. Hyde Avenue	74	**78**	**78**	Yes	Not applicable for commercial property			
3. Commercial 10733 E. Janelli Court	69	**73**	**73**	Yes	Not applicable for commercial property			
4. Commercial 6544 Avenue 308	68	**73**	**73**	Yes	Not applicable for commercial property			
5a. Residence 6740 Harvest Road	66	**70**	**70**	Yes	66	65	65	no/yes
5b. Residence 30685 Juniper Street	64	**68**	**68**	Yes	64	64	63	no/yes
6a. Residence 30676 Road 67	68	**71**	**71**	Yes	66	65	64	no/yes
6b. Residence 30690 Road 67	66	**71**	**71**	Yes	65	64	64	no/yes
6c. Residence 1022 W. Houston Avenue	66	**69**	**69**	Yes	65	64	63	no/yes
7a. Residence 30704a Road 67	71	**74**	**74**	Yes	67	66	65	no/yes
7b. Residence 30704b Road 67	72	**75**	**75**	Yes	67	66	65	no/yes
8. Residence 30751 Road 67	67	**69**	**69**	Yes	65	65	64	no/yes
9. Residence 30759 Road 67	65	**68**	**68**	Yes	65	64	63	no/yes
10. Residence 30708 Road 67	64	**66**	**66**	Yes	64	64	63	no/no
11a. Residence 30778 Dollar Hide Road	66	**70**	**70**	Yes	67	67	65	no/yes
11b. Residence 30760 Dollar Hide Road	68	**69**	**69**	Yes	66	65	64	no/yes
11c. Residence 30746 Dollar Hide Road	69	**73**	**73**	Yes	66	66	65	no/yes

Note: Bold numerals indicate noise level approaches or exceeds the Noise Abatement criteria

In Table 2.13, 16 receivers in Segment 3 are predicted to exceed the Noise Abatement Criteria by the year 2034. Three of the 16 receivers are commercial establishments and noise abatement is not recommended at these locations. The remaining 13 receivers are residential properties and soundwalls must be considered.

Avoidance, Minimization, and/or Noise Abatement under the National Environmental Policy Act

For purposes of National Environmental Policy Act, soundwalls must be considered because 29 receivers have been identified as approaching or exceeding the Noise Abatement Criteria by the year 2034.

A Noise Abatement Decision Report was prepared that summarizes the conclusions of the Noise Study Report relating to acoustical feasibility and the reasonable allowances for abatement. It also presents the engineering cost estimate for the evaluated abatement; the engineering evaluation of no acoustical feasibility issues; the preliminary noise abatement decision; and preliminary information on secondary effects of abatement, such as impacts on cultural resources, scenic views, hazardous waste, biology, etc. The Noise Abatement Decision Report proposed four acoustically feasible soundwalls as shown in Table 2.14 below.

Table 2.14 summarizes the key information used in making the preliminary noise abatement decision to construct soundwalls within the project limits. All locations were considered to be acoustically feasible. The fourth location in Segment 3, for the residences within the community of Goshen would require a 19-foot soundwall to reach a 5-dBA reduction in noise levels, which would make the cost unreasonable. In addition, this soundwall is located in a floodplain area. The soundwall would intensify the flooding condition in which floodwater would flow across the highway. It was determined that a soundwall at this location is not reasonable.

Table 2.14 Barrier Evaluation

Receptor	Ultimate Noise Barrier Location	Length/ Height (feet)	Acoustically Feasible?	Reasonable Allowance per Residence	Total Reasonable Allowance	Estimated Cost	Cost Less than Allowance?
New Life Church Seg. 1	R/W Line 16 feet from proposed EP	433 /11	Yes	$36,000	$144,000	$127,069	Yes
Blain Park Seg. 1	R/W Line 28 feet from existing EP	410/11	Yes	$36,000	$144,000	$122,000	Yes
Tulare Public Cemetery Seg.2	R/W Line 28 feet from existing EP	768 /10	Yes	$36,000	$288,000	$200,067	Yes
Goshen	R/W Line 13 feet from new EP	1276/19	Yes	$36,000	$576,000	$634,119	No

R/W = right-of-way; EP = edge of pavement

New Life Church

The New Life Church receptor is located at 1820 N. Gem Street in Tulare, California. Measurements taken at this receptor indicate that the existing noise level at that location is 70 decibels. The future noise level at the New Life Church with the project is predicted to be 74 decibels, which exceeds the noise abatement criterion of 67 decibels. To achieve a 5-decibel reduction, an 11-foot-high noise wall that is 433 feet long would be needed. If the total cost of the wall at this location is less than the total cost allowance, then the wall would likely be incorporated into the project. The total cost allowance, calculated in accordance with Caltrans' *Traffic Noise Analysis Protocol,* is $144,000. The current estimated cost of the wall is $127,069.

Blain Park

The Blain Park receptor is located at "M" Street and Garfield Avenue in Tulare, California. Measurements taken at Blain Park indicate that the existing noise level at that location is 68 decibels. The future noise level at Blain Park with the project is predicted to be 73 decibels, which exceeds the noise abatement criterion of 67 decibels. To achieve a 5-decibel reduction, an 11-foot-high noise wall that is 410 feet long would be needed. If the total cost of the wall at this location is less than the total cost allowance, then the wall would likely be incorporated into the project. The total cost allowance, calculated in accordance with Caltrans' *Traffic Noise Analysis Protocol*, is $144,000. The current estimated cost of the wall is $122,000.

Tulare Public Cemetery

The Tulare Public Cemetery receptor is located at 900 E. Kern Avenue, in Tulare, California. Measurements taken at the Tulare Public Cemetery indicate that the existing noise level at that location is 70 decibels. The future noise level at Tulare Public Cemetery with the project is predicted to be 72 decibels, which is the noise abatement criterion for cemeteries. To achieve a 5-decibel reduction, a 10-foot-high noise wall that is 768 feet long would be needed. If the total cost of the wall at this location is less than the total cost allowance, then the wall would likely be incorporated into the project. The total cost allowance, calculated in accordance with Caltrans' *Traffic Noise Analysis Protocol*, is $288,000. The current estimated cost of the wall is $200,067.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of barriers at New Life Church, Blain Park, and the Tulare Public Cemetery (see Figure 2-6). If during final design, conditions have substantially changed, noise abatement may not be necessary.

Proposed Soundwall Locations

Figure 2-6 Proposed Soundwall Locations

The final decision on noise abatement would be made upon completion of the project design and the public involvement processes.

Environmental Consequences under the California Environmental Quality Act

When determining whether a noise impact is significant under the California Environmental Quality Act, comparison is made between the no-build noise level and the build noise level. The California Environmental Quality Act noise analysis is completely independent of the National Environmental Policy Act (23 Code of Federal Regulations 772) analysis discussed above, which is centered on noise abatement criteria. Under the California Environmental Quality Act, the assessment entails looking at the setting of the noise impact and then how large or perceptible any noise increase would be in the given area. Key considerations include the uniqueness of the setting, the sensitive nature of the noise receptors, the magnitude of the noise increase, the number of residences affected, and the absolute noise level.

Caltrans identified 52 sensitive receivers within the project limits. In accordance with Caltrans *Traffic Noise Analysis Protocol*, a noise impact occurs when the future noise level with the project results in a substantial increase in noise level (defined as a 12-decibel or more increase). None of the sensitive noise receivers identified for the project were predicted to have a noise increase of 12 decibels or more. In addition, future noise levels without the project would be the same as future noise levels with the project. Therefore, construction of the proposed project would not result in a significant noise impact under the California Environmental Quality Act.

Avoidance, Minimization, and/or Noise Abatement under the California Environmental Quality Act

No impacts are expected under the California Environmental Quality Act. No abatement is required.

Construction Noise

Noise at the construction site would be temporary and intermittent, and its intensity would vary. The degree of construction noise impacts may vary for different areas of the project site and depending on the construction activities. Highway construction is accomplished in several different phases. These phases and their estimated overall noise levels at the right-of-way can be characterized as shown in Table 2.15 (Federal Highway Administration, 1977):

Table 2.15 Expected Noise Levels at Construction Phases

Phase	Leq (dBA) at 15/30 meters of Source
Clearing and Grubbing	86/83
Earthwork	88/85
Foundation	85/82
Base Preparation	88/85
Paving	89/86

Existing noise levels can be compared with the expected noise levels produced by various construction activities to assess construction noise impacts. During the construction period, sensitive receptors that are close to the highway may experience temporary impacts.

The following equipment noise control measures should be implemented to minimize noise and vibration disturbances at sensitive receptors during periods of construction:

- Use newer, or well-maintained, equipment with improved muffling and ensure that all equipment items have the manufacturers' recommended noise abatement measures, such as mufflers, engine enclosures, and engine vibration isolators intact and operational. Newer equipment will generally be quieter in operation than older equipment. All construction equipment should be inspected at periodic intervals to ensure proper maintenance and presence of noise control devices (such as mufflers and shrouding, etc.).
- Use construction methods or equipment that would provide the lowest level of noise and ground vibration impact such as alternative low noise pile installation methods.
- Turn off idling equipment.
- Use temporary noise barriers and relocate them as needed, to protect homes and other sensitive locations against excessive noise from construction activities. Noise barriers can be made of heavy plywood or moveable insulated sound blankets.

The following administrative measures would be implemented for noise:

- Implement a construction noise- and vibration-monitoring program to limit the impacts.
- Plan noisier operations during times of least sensitivity to receptors.
- Keep noise levels relatively uniform and avoid impulsive noises.

- Maintain good public relations with the community to minimize objections to the unavoidable construction impacts. Provide frequent activity updates of all construction activities.

A combination of abatement techniques with equipment noise control and administrative measures can be selected to provide the most effective means to minimize effects of construction activity impacts. Application of abatement measures would reduce the construction impacts; however, temporary increase in noise and vibration would likely occur.

2.3 Biological Environment

2.3.1 Wetlands and Other Waters of the U.S.

Regulatory Setting

Wetlands and other waters of the U.S. are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 United States Code 1344) is the primary law regulating wetlands and waters of the U.S. The Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers with oversight by the Environmental Protection Agency.

The Executive Order for the Protection of Wetlands (Executive Order 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as the Federal Highway Administration, and Caltrans as assigned, cannot undertake or provide assistance for

new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the California Department of Fish and Game and the State Regional Water Quality Control Boards. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved. Sections 1600-1607 of the Fish and Game Code require any agency that proposes a project that would substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify the California Department of Fish and Game before beginning construction. If the California Department of Fish and Game determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement would be required. The California Department of Fish and Game's jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the U.S. Army Corps of Engineers may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the Department of Fish and Game.

The State Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The State Regional Water Quality Control Boards also issue water quality certifications in compliance with Section 401 of the Clean Water Act. Refer to the Water Quality section for additional details.

Affected Environment

Caltrans prepared two biological reports for this project: a Biological Assessment was prepared in August 2007 and a Natural Environment Study was prepared in February 2008.

The Biological Study Area was investigated to determine the presence of U.S. Army Corps of Engineers jurisdiction waters of the U.S. and wetlands. Several waterways within the project limits are used to convey irrigation water and are maintained on a regular basis. The following waterways are located within the Biological Study Area: Evans Ditch, South and North Fork Persian Ditch, Persian Ditch, Railroad Ditch, Rockyford Ditch, Watson Ditch, Tulare Irrigation Canal, Cameron Creek, Packwood

Creek, and Mill Creek. Mill Creek is identified in the Tulare County General Plan as an important creek that furnishes irrigation water.

Environmental Consequences

No jurisdictional wetlands are present within the Biological Study Area.

The presence of U.S. Army Corps of Engineers jurisdictional waters of the U.S. was identified. Permanent and temporary impacts to jurisdictional waterways under the authority of the U.S. Army Corps of Engineers would occur at Cameron Creek, Packwood Creek, and Mill Creek. (Refer to Table 2.16). Total temporary impacts are 0.87 acre. These temporary impacts are as a result of vehicles, construction equipment, and personnel within the waterways. Total permanent impacts are 0.21 acre and include the widening of the structures at these waterways.

Table 2.16 Impacts to Waters of the U.S.

Bridge	Temporary (acres)	Permanent (acres)
Cameron Creek Bridge	0.17	0.05
Packwood Creek Bridge	0.20	0.05
Mill Creek Ditch Bridge	0.50	0.11
Totals	**0.87**	**0.21**

Avoidance, Minimization, and/or Mitigation Measures

Caltrans, in coordination with the California Department of Fish and Game, would compensate for the permanent loss of waters of the U.S. Refer to Chapter 3 for coordination with California Department of Fish and Game.

One or more of the following options would be used:

- Payment of the appropriate mitigation fee;
- Dedication of mitigation lands;
- Purchase of approved mitigation bank credits; or
- Development of an alternative mitigation plan.

When compensating at a 3:1 ratio, at least one acre of wetlands of waters of the U.S. creation must be provided for each acre of wetland impact; the remaining two acres may be provided either as creation or preservation. The mitigation ratio for permanent impacts to waters of the U.S. would be determined by regulatory agencies during the permitting process. U.S. Army Corps of Engineers jurisdictional waters of the U.S. would be affected by the project, and a Nationwide Permit #14 would be required for construction activities affecting the waterways within the project area. A certification from the State Regional Water Quality Control Board is required, and a California Department of Fish and Game 1602 Streambed Alteration Agreement would be required for construction activities at Cameron Creek, Packwood Creek, and Mill Creek, and several ditches and canals.

2.3.2 Animal Species

Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Administration Fisheries Service, and the California Department of Fish and Game are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the state or federal Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.3.3. All other special-status animal species are discussed here, including California Department of Fish and Game fully protected species and species of special concern, and the U.S. Fish and Wildlife Service or National Oceanic and Atmospheric Administration Fisheries Service candidate species.

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act
- Marine Mammal Protection Act

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act
- Sections 1601–1603 of the Fish and Game Code
- Sections 4150 and 4152 of the Fish and Game Code

Affected Environment

Caltrans prepared two biological reports for this project: a Biological Assessment was prepared in August 2007 and a Natural Environment Study was prepared in February 2008. An online U.S. Fish and Wildlife Service Species List was obtained on October 11, 2007. See Appendix E.

According to sensitive species database lists obtained from the U.S. Fish and Wildlife Service, the California Department of Fish and Game, and the California Native Plant Society, a total of 22 special-status species were observed within the Goshen, Tulare, and Visalia U.S. Geological Survey topographical quadrangles. Of the 22 special-status species evaluated, it was determined that the following animal species may be affected by the Tulare to Goshen Six-Lane Project:

- San Joaquin kit fox (Vulpes macrotis mutica)
- Swainson's hawk (Buteo swainsoni)
- Vernal pool fairy shrimp (Branchinecta lynchi)
- Vernal pool tadpole shrimp (Branchinecta pakcardi)
- Valley elderberry longhorn beetle (Desmocerus californicus dimorphus)

These species are discussed in Section 2.3.3 Threatened and Endangered Species.

Approximately 800 bird species are protected under the Migratory Bird Treaty Act of 1918. Within the project limits, migratory birds may nest in vegetation or on structures, such as bridges, during the nesting season, which occurs from February 15 through September 1.

Environmental Consequences

Direct effects to migratory birds could include the displacement of birds to another area or loss of suitable nesting and foraging habitat. The majority of the widening is within the median, which does not provide foraging habitat for birds. Construction of the project is not expected to contribute to the long-term degradation of foraging habitat for birds.

Avoidance, Minimization, and/or Mitigation Measures

Pre-construction surveys would be performed to determine the presence of migrating nesting birds within the project area. The following protection measures for migratory birds would be included in the construction contract special provisions:

- Construct the project outside of the migratory bird-nesting season, which occurs between February 15 through September 1.

- Conduct vegetation (tree or shrub) removal outside of the migratory bird-nesting season.
- If construction occurs during the migratory bird-nesting season, install exclusion devices such as netting on structures that could potentially be inhabited by swallows. Exclusionary devices shall be inspected daily to prohibit swallows from nesting without causing them harm.
- When migratory bird nests are discovered that may be adversely affected by construction activity, or when a bird is found injured or killed as a result of construction activity, immediately stop work within this area.
- If construction activities are going to occur during the migratory bird-nesting season and habitat is present that may support nesting birds, then a pre-construction survey would be necessary.
- If a nest becomes active during construction, monitoring may be required if construction activities are occurring within the vicinity of the nest.

2.3.3 Threatened and Endangered Species

Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act: United States Code, Section 1531, et seq. See also 50 Code of Federal Regulations Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems on which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration, and Caltrans as assigned, are required to consult with the U.S. Fish and Wildlife Service and the National Oceanographic and Atmospheric Administration Fisheries Service to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion or an incidental take statement. Section 3 of the Federal Endangered Species Act defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act, California Fish and Game Code, Section 2050, et seq. The California Endangered Species Act emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset

project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Game is the agency responsible for implementing the California Endangered Species Act. Section 2081 of the Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The California Endangered Species Act allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by the California Department of Fish and Game. For projects requiring a Biological Opinion under Section 7 of the Federal Endangered Species Act, the California Department of Fish and Game may also authorize impacts to the California Endangered Species Act species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

Affected Environment

Caltrans prepared two biological reports for this project: a Natural Environment Study was prepared in February 2008 and to comply with Section 7 of the Federal Endangered Species Act, a Biological Assessment was prepared in August 2007. A Biological Opinion was received from the U.S. Fish and Wildlife Service on February 21, 2008.

The following species are either threatened or endangered and may be affected by the Tulare to Goshen Six-Lane Project:

- San Joaquin kit fox
- Swainson's hawk
- Vernal pool fairy shrimp
- Vernal pool tadpole shrimp
- Valley elderberry longhorn beetle

San Joaquin kit fox

The federally endangered and state threatened San Joaquin kit fox is a small, nocturnal (active at night) fox resembling a small lanky dog with disproportionately large ears. This species can be found in the San Joaquin Valley from southern Kern County north to eastern Contra Costa County and eastern Stanislaus County (Brown et al. 2006). The current distribution of the San Joaquin kit fox consists of suitable habitat on the San Joaquin Valley floor and in the surrounding foothills of the coastal ranges, Sierra Nevada, and Tehachapi Mountains (Brown et al. 2006). The proposed project is located in the central portion of the San Joaquin kit fox range. According to

the *United States Fish and Wildlife Service Recovery Plan for Upland Species of the San Joaquin Valley, California,* the San Joaquin kit fox is associated with the following communities: Valley Sink Scrub, Interior Coast Range Saltbush Scrub, Upper Sonoran Subshrub Scrub, annual grasslands, and remaining native grasslands. A large portion of the central range of this species has been converted into agricultural lands. In these areas, the San Joaquin kit fox is known to inhabit grazed, non-irrigated grasslands. San Joaquin kit foxes excavate their own den in loose soil, use existing dens, or use man-made structures such as culverts and pipes, and will utilize several dens at a time. The Biological Study Area and adjacent lands are intensively cultivated and no natural habitat is present. The Tulare to Goshen Six-Lane Project is composed primarily of agricultural lands. According to the U.S. Fish and Wildlife Service, agricultural lands are not suitable for denning; they serve as potential foraging habitat (an area where food is found).

The following factors have contributed to the decline of the San Joaquin kit fox: 1) loss, degradation, and fragmentation of habitat due to agricultural, industrial, and urban developments; 2) natural mortality due to predation, starvation, flooding, and drought; and 3) human-induced mortality due to shooting, trapping, poisoning, electrocution, road kills, and suffocation (Brown et al. 2006).

Several foxes were observed within the Biological Study Area during a spotlight survey conducted by Caltrans biologists in August 2000 for the Kings-Tulare 198 Expressway Project. In July 2003, biologists conducted preconstruction surveys for a Caltrans project near Avenue 312 (Betty Drive) within the community of Goshen. Six potential dens were identified and one San Joaquin kit fox was observed approximately 2 miles north of the project site.

Swainson's hawk

The state-threatened Swainson's hawk is listed on the California Department of Fish and Game's California Natural Diversity Database. Caltrans biologists surveyed the Biological Study Area for Swainson's hawk on March 21, 24, 26, 2003, and again on April 2, 11, 14, 17, and 24, 2003. No Swainson's hawks were observed soaring or nesting during these surveys. Past occurrences are listed on the California Natural Diversity Database: one sighting on June 21, 1994 where two adults and a juvenile were observed nesting in a large valley oak located two miles south of the City of Tulare; one sighting on July 31, 1998 where a pair of Swainson's hawks were observed one half mile east of the Tulare Municipal Airport; and one sighting on July

13, 2007 where a pair of adult Swainson's hawk and two juveniles were observed along State Route 198, 2.2 miles west of the State Route 198/99 interchange.

The Swainson's hawk requires adjacent suitable foraging habitat such as grasslands, alfalfa, or grain fields that support rodent populations. The current Swainson's hawk distribution is restricted to portions of the Central Valley and Great Basin regions where suitable nesting and foraging habitat is still available (California Department of Fish and Game 2000). According to the California Department of Fish and Game, over 85 percent of this species' territory is in California's Central Valley, in riparian systems adjacent to suitable foraging habitats. The Swainson's hawk roosts in large trees, but will roost on the ground if no trees are available (Zeiner et al. 1990). Suitable nest sites may be found in mature riparian forest, lone trees or groves of oaks, trees in agricultural fields, and mature roadside trees (California Department of Fish and Game 2000). Breeding occurs from late March to late August, with peak nesting activity occurring in late May through July (Zeiner et al. 1990). The Swainson's hawk diet consists of mice, gophers, ground squirrels, rabbits, large arthropods, amphibians, reptiles, birds, and rarely fish (Zeiner et al. 1990).

Vernal pool fairy shrimp

The federally threatened vernal pool fairy shrimp is a small crustacean (an animal that has a hard shell instead of a skeleton and usually lives in water) ranging in size from 0.5 – 1 inch and typically appearing semi-transparent or grayish-white in color. The vernal pool fairy shrimp are filter feeders, and their diet consists mainly of algae, bacteria, protozoa, rotifers, and bits of detritus. They are known to occur in a wide range of vernal pool habitats in the southern and Central Valley areas of California. Two major habitat types are characteristic of this species: small, clear, sandstone rock pools surrounded by foothill grasslands or small grass or mud-bottomed swales, or basalt flow depression pools in unplowed grasslands (U.S. Fish and Wildlife Service 2007).

Vernal pool tadpole shrimp

The federally endangered vernal pool tadpole shrimp is a small crustacean that reaches a length of two inches as an adult. The vernal pool tadpole shrimp climbs or scrambles over objects, as well as plowing along or within bottom sediment. Their diet consists of organic debris and living organisms, such as fairy shrimp and other invertebrates. (U.S. Fish and Wildlife Service 2007).

Based on a biological database review, background research, and field visits, the data suggest that the suitability of the project site for vernal pool fairy shrimp and vernal pool tadpole shrimp is low to none. It was determined that protocol surveys for these shrimp species were not warranted. The U.S. Fish and Wildlife Service did not offer any comments on the "no effect" determination for the vernal pool fairy shrimp and vernal pool tadpole shrimp. No further discussion of these species is necessary.

Valley elderberry longhorn beetle

The federally threatened valley elderberry longhorn beetle occurs in the Central Valley of California and surrounding foothills to 2,500 feet. This species is present within the project area. It prefers riparian areas and reproduces in the stems of the blue elderberry *(Sambucus mexicana)*. Elderberries grow in a variety of upland sites. The female beetles lay their eggs on the bark, and after hatching, the larvae burrow into the stems where they may live and feed up to two years, before entering the pupal stage and transforming into adults. Frequently the only exterior evidence of the species is the presence of the exit holes created by the larvae just before the pupal state (ESSIG Museum of Entomology 2006).

Surveys were conducted in accordance with the Conservation Guidelines for the valley elderberry longhorn beetle (U.S. Fish and Wildlife Service 1999). Thirteen blue elderberry shrubs were found at the following locations:

- Elderberry shrub #1 is located east of the Caldwell Avenue/State Route 99 Interchange along an embankment within the Caltrans right-of-way, 20 feet from the edge of the pavement.
- Elderberry shrub #2 is located 1.2 miles south of the Caldwell Avenue/State Route 99 Interchange on the west side of the existing alignment within the Caltrans right-of-way, 25 feet from the edge of the pavement.
- Elderberry shrub #3 is located 1.4 miles south of the Caldwell Avenue/State Route 99 Interchange on the west side of the existing alignment within the Caltrans right-of way, 16 feet from the edge of the pavement.
- Elderberry shrubs (#4 and #5) were observed within the project impact area. These two shrubs are located directly west of the Tagus Ranch Motel along the Caltrans right-of-way fence east of State Route 99. Since the shrubs are located north of the Tagus overcrossing where Route 94 merges onto State Route 99, both of these elderberry shrubs would need to be relocated.
- Elderberry shrub #6 was observed southwest of the West Visalia overhead bridge at post mile 38.22 and outside of the project impact area.

- Elderberry shrub #7 is located underneath the West Visalia overhead bridge at post mile 38.22. This shrub is located on the northern embankment of the West Visalia overhead bridge and would need to be relocated.
- Elderberry shrubs #8, #9, and #10, were located outside of the project impact area and west of the West Visalia overhead bridge at post mile 38.18. All three shrubs are located approximately 100 feet from the West Visalia overhead bridge.
- Elderberry shrubs #11, and #12 were observed northwest of the West Visalia overhead bridge at post mile 38.22. These shrubs are located adjacent to the Caltrans right-of-way fence and are outside of the project impact area. Both shrubs are located 87 feet from the edge of pavement.
- Elderberry shrub #13 was observed north of the State Route 99/198 interchange and located east of State Route 99. The shrub is located outside of the project impact area, approximately 110 feet from the edge of the pavement.

On June 28, 2007, a field site visit was conducted and elderberry shrubs #2 and #3 had been cut down. Elderberry shrub #3 is now located more than 25 feet from the edge of the pavement. There is new growth but there are no stems greater than or equal to 1 inch at ground level for both shrubs.

Environmental Consequences

San Joaquin kit fox

Habitat

The construction of portions of the northbound alignment and modifications to structures within the current and proposed Caltrans right-of-way would affect San Joaquin kit fox foraging habitat. Permanent and temporary impacts to this foraging habitat, which consists of fallow agricultural lands, orchards and vineyards, irrigated row crops, and ruderal lands, would occur during construction. A summary of potential foraging habitat impacts for Alternative 1 are listed in Table 2.17.

Table 2.17 San Joaquin Kit Fox
Potential Foraging Habitat Impacts by Alternative

Location	Habitat	Type of Impact	Impact in acres
Non-median area	Agricultural Lands/Ruderal	Permanent	41
		Temporary	107

Alternative 1 would affect 41 acres of permanent and 107 acres of temporary potential foraging habitat for the San Joaquin kit fox. The State Route 99 median does not provide potential foraging habitat due to its disturbed condition.

Suitable habitat for denning does not exist within or adjacent to the project impact area. The proposed construction would result in the permanent loss of potential foraging habitat within the agricultural land/ruderal habitat. Due to the vast agricultural lands present in the Biological Study Area, as well as the likelihood of prey abundance, it is expected that the San Joaquin kit fox would not be affected greatly by the loss of potential foraging habitat within the project area. Caltrans and the Federal Highway Administration determined that this project is likely to adversely affect the San Joaquin kit fox; the U.S. Fish and Wildlife Service concurred on this determination.

Swainson's hawk

A direct impact to the state-threatened Swainson's hawk would be the removal of a tree containing a nest or potential suitable foraging habitat. This project proposes to remove mature trees within the median and some mature trees adjacent to the alignment to construct the new lanes. Commercial development is a serious threat to the Swainson's hawk as well (California Department of Fish and Game 2000). Potential indirect impacts would include construction activities within 0.25 mile of an active Swainson's hawk nest that may produce disturbance resulting in the abandonment of eggs and/or young.

Vernal pool fairy/tadpole shrimp

No species of listed shrimp occur within the project impact area. A "no effect" determination was made and the U.S. Fish and Wildlife Service did not challenge this determination. No further discussion is necessary.

Valley elderberry longhorn beetle

Total project impacts to the valley elderberry longhorn beetle includes three elderberry shrubs (#4, #5, and #7) with a total of six stems greater than or equal to one inch at ground level. These shrubs would be removed during construction. Environmentally Sensitive Areas would be required around six other shrubs in Caltrans right-of-way and four shrubs on private property. Caltrans and the Federal Highway Administration determined that this project is likely to adversely affect the valley elderberry longhorn beetle; the U.S. Fish and Wildlife Service concurred on this determination.

Cumulative Impacts

Several Caltrans projects are under construction or being planned in Tulare County in the general vicinity of the Tulare to Goshen Six-Lane Project (post miles 30.6/41.3). Two similar six-lane projects are located north and south of this project. All projects would be located along State Route 99 where similar conditions exist. Most of the land use is agricultural with areas of urban development such as the City of Tulare and the community of Goshen. Table 2.18 lists these projects, post mile location, status, and potential biological issues.

Table 2.18 Other Caltrans Projects Near Proposed Project

Project	Post Miles	Status	Potential Biological Issues
Tagus to Goshen Rehabilitation	34.0/42.0	In Construction	None
Goshen to Kingsburg Six-Lane Project	41.3/53.9	Design and Right-of-way Phase in progress	Similar to project
Tulare City Six-Lane Conversion	25.4/30.5	Project Initiation Phase	Within city
Cartmill Avenue Interchange Project	31.3/32.6	Project Initiation Phase	Similar to project
Betty Drive Interchange Project	39.6/41.3	Project Initiation Phase	Within city

Biological impacts for projects currently in the Project Initiation Phase are not fully known at this time, but are anticipated to be similar to other projects within the area. No biological impacts were found for the Tagus to Goshen Rehabilitation Project currently in construction. The Tulare City Six-Lane Project is anticipated to have few, if any, impacts due to its urban location. A Biological Opinion for the Goshen to Kingsburg Six-Lane Project was obtained from U.S Fish and Wildlife Service in June 2005. It is discussed below with the Biological Opinion received for the Tulare to Goshen Six-Lane Project. The Goshen to Kingsburg Six-Lane Project is a similar project with the addition of two lanes, addition of median barriers, and bridge modifications. The project would require 3.66 acres of new right-of-way.

The cumulative effects of all the future state, tribal, local, and private actions that are reasonably certain to occur in the project area could continue to have a harmful effect on the reproduction, numbers, and distribution of federally listed species. However, it is anticipated cumulative effects from this project would be minimal due to the lack

of quality habitat within the project area, potentially low numbers of protected species within or near the project area, and the proximity to urban areas, as discussed below.

San Joaquin kit fox

The cumulative effects associated with the proposed project and other non-federal actions are considered minimal due to the 1) lack of quality habitat; 2) potentially low numbers of San Joaquin kit fox in the project vicinity; 3) proximity of urban areas within the Biological Study Area; 4) absence of San Joaquin kit fox core populations, satellite populations, or linkages within the Biological Study Area (Cypher 2000 and U.S. Fish & Wildlife Service 2004); and 5) absence of recovery plan implementation within the Biological Study Area (U.S. Fish & Wildlife Service 1998). There is no development contingent on the proposed project.

Biological Opinions received for the two projects in this area analyzed 1) the status of the species, 2) the environmental baseline, 3) effects of the action, and 4) cumulative effects. It was concluded that neither project would jeopardize the continued existence of the San Joaquin kit fox.

Swainson's hawk

The cumulative effects associated with the proposed project and other non-federal actions are considered minimal due to the lack of quality nesting and foraging habitat within and adjacent to the Project Impact Area and the absence of Swainson's hawks during Caltrans biological surveys. There is no development contingent on the proposed project and there are no other projects in the area in which adverse cumulative impacts to the Swainson's hawk are anticipated, according to California Department of Fish and Game.

Valley elderberry longhorn beetle

The cumulative effects associated with the proposed project and other non-federal actions are considered minimal due to lack of quality habitat, potentially low numbers of elderberry shrubs in the project vicinity, and proximity of urban areas in the Biological Study Area. There is no development contingent on the proposed project.

Biological Opinions received for the two projects in this area analyzed 1) the status of the species, 2) the environmental baseline, 3) effects of the action, and 4) cumulative effects. The Biological Opinions for the Goshen to Kingsburg Six-Lane Project and the Tulare to Goshen Six-Lane Project concluded that the projects would not jeopardize the continued existence of the Valley elderberry longhorn beetle. The Biological Opinion for the Goshen to Kingsburg Six-Lane Project concluded that the

project would adversely affect seven shrubs that would need to be relocated. However, it also stated that mitigation that would be implemented should lead to the development of protected habitat areas. The Biological Opinion for the Tulare to Goshen Six-Lane Project concluded that the project would adversely affect three shrubs that would need to be relocated. However, it also stated that mitigation that would be implemented should lead to the development of protected habitat areas.

Avoidance, Minimization, and/or Mitigation Measures

The proposed project has been designed to avoid and minimize impacts to the natural environment:

- The southbound lane addition would be constructed entirely within the median for the length of the project. Portions of the northbound lane addition would also be constructed in the median. The median is highly disturbed and does not provide habitat for federal- or state-listed or proposed species.
- Minimal reconstruction of structures is proposed for the project.
- Concrete median barrier exists between post miles 34.4 and 37.2. The barrier is 2.9 miles in length and does not allow for the passage of wildlife across this section of State Route 99. This barrier would be redesigned to be more conducive for wildlife passage.

San Joaquin kit fox

To comply with Section 7 of the Federal Endangered Species Act, the following mitigation measures have been implemented into the project for the San Joaquin kit fox. As mitigation for potential project effects on the movement of San Joaquin kit fox through the project area, Caltrans proposes the following: a) leave existing bridge and box culvert undercrossings in place and clear of debris; b) construct thrie-beam guardrail, which would allow for San Joaquin kit fox movement across State Route 99; c) construct concrete median barriers with openings for San Joaquin kit fox movement across State Route 99; and d) design right-of-way fences to allow for San Joaquin kit fox passage.

Caltrans would conduct a meeting/training on the San Joaquin kit fox for construction personnel prior to groundbreaking activities.

Contract Special Provisions for the San Joaquin kit fox would be adhered to during construction.

Table 2.19 reflects Caltrans' proposal to mitigate for the permanent and temporary disturbance of potential foraging habitat through land acquisition or conservation easements. Land compensation may occur within an approved mitigation bank. The mitigation ratio is proposed at 1.1:1 for permanent impacts and 0.5:1 for temporary impacts.

Table 2.19 Mitigation Compensation for Temporary and Permanent Habitat Impacts San Joaquin kit fox

Type of Impact	Mitigation Compensation Ratio	Mitigation: Total acres of Compensation
Permanent	1.1:1	45
Temporary	0.5:1	54

Swainson's hawk

Pre-construction surveys would be performed by the District Biologist. It is recommended that mature trees within the project impact area be removed outside of the Swainson's hawk nesting season (March 1 – September 15). According to the California Department of Fish and Game, avoidance of active Swainson's hawk nests during the nesting season is preferred in all cases. If trees are removed during the nesting season, potential suitable nesting trees must be surveyed by a District Biologist prior to their removal. The avoidance buffer for an active Swainson's hawk is 600 feet. If avoidance is not practicable, biological monitoring by the District Biologist, concurrent with consultation with the California Department of Fish and Game, would proceed to ensure that no mortality to Swainson's hawks occur as a result of construction.

Valley elderberry longhorn beetle

To comply with Section 7 of the Federal Endangered Species Act, the following mitigation measures have been implemented into the project for the Valley elderberry longhorn beetle. Proposed mitigation measures would assist in minimizing impacts of the valley elderberry longhorn beetle in the form of compensatory mitigation and the establishment of Environmentally Sensitive Areas.

Compensatory Mitigation

Construction would result in the removal of three elderberry shrubs. To minimize unavoidable impacts, shrubs #4, #5, and #7 would be transplanted to a suitable area at an alternate location. These shrubs meet the criteria for programmatic consultation

with the U.S. Fish and Wildlife Service on actions that the Federal Highway Administration may take on projects with limited effects on the valley elderberry longhorn beetle. Mitigation would also involve the establishment of elderberry seedlings (15) and associated native plants (15) in an appropriate-sized mitigation area of 0.12 acres. The mitigation area would be preserved in perpetuity, and may occur within an approved mitigation bank.

Under the current schedule for this project, construction would occur in the year 2012. Based on the condition and location of the shrubs, additional stem growth is anticipated before the project is constructed. Within one year of construction, Caltrans would perform an elderberry shrub survey to verify actual stems to be removed by the proposed project. If the stem count exceeds the amount specified in the Biological Opinion, Caltrans would re-initiate formal consultation with the U.S. Fish and Wildlife Service to amend the Biological Opinion.

Environmentally Sensitive Areas

Ten elderberry shrubs located within and adjacent to the Caltrans right-of-way would be avoided through the use of Environmentally Sensitive Area fencing during construction. Elderberry shrubs #1, #2, #3, #6, #11, and #12 are located within the Caltrans right-of-way; elderberry shrubs #8, #9, #10, and #13 are located on private property. See the Table 2.20 for locations and types of Environmentally Sensitive Areas in relation to the elderberry shrubs:

Table 2.20 Elderberry Shrubs and Environmentally Sensitive Areas

Elderberry Shrub	Environmental Sensitive Area
#1	25 feet from the edge of the shrub canopy drip line
#2	25 feet from the edge of the shrub canopy drip line
#3	25 feet from the edge of the shrub canopy drip line
#6	60 feet from the edge of the shrub canopy drip line
#8	Linear fencing 100 feet north and south of shrub, along the Caltrans right-of-way
#9	Linear fencing 100 feet north and south of shrub, along the Caltrans right-of-way
#10	Linear fencing 100 feet north and south of shrub, along the Caltrans right-of-way
#11	80 feet from the edge of the shrub canopy drip line
#12	80 feet from the edge of the shrub canopy drip line
#13	Linear fencing 100 feet north and south of shrub, along the Caltrans right-of-way

Environmentally Sensitive Areas would be established at a minimum of 25 feet from the drip line of elderberry shrubs #1, #2, and #3; 60 feet from the drip line of elderberry shrub #6; and 80 feet from the drip line of elderberry shrub #11. Elderberry shrubs #8, #9, #10 and #13 are located on private property, therefore, a linear Environmentally Sensitive Area would be established along the Caltrans right-of-way line that would extend 100 feet to the north and south of each elderberry shrub.

Construction activities are neither expected to measurably reduce shrub survivorship nor impact the valley elderberry longhorn beetle. The following information is provided to support this determination:

1. No soil excavation would occur within the shrub drip lines; no damage to root structure would occur.
2. No earthen fill or soil compaction would proceed within the shrub drip lines.
3. The southbound lane addition would be within the existing median and would reduce potential impacts to shrubs located west of State Route 99.
4. No adverse alteration in hydrology would occur.
5. The shrubs are large and healthy despite the fact that the existing landscape setting is highly disturbed. Background dust and vibration levels are inferred to be relatively high.
6. No habitat fragmentation would occur; the shrubs are already isolated.
7. No use of chemicals in the vicinity of the shrubs would occur.
8. No increase in pedestrian traffic or access would occur – the shrubs are located in isolated, restricted-access areas within the Caltrans/Union Pacific Railroad Company right-of-way interface and private property.
9. No increase in night lighting would affect the shrubs.
10. No increase in predation of the valley elderberry longhorn beetle is anticipated because no beetles are currently present in the shrubs. Furthermore, project construction is not expected to increase future access to the shrubs by potential predators.
11. Standard contract provisions and Best Management Practices would be employed to minimize airborne dust and soil erosion.

Cumulative Impacts

No mitigation for cumulative impacts would be required for the San Joaquin kit fox, Swainson's hawk, or Valley elderberry longhorn beetle.

2.3.4 Invasive Species

Regulatory Setting

On February 3, 1999, President Bill Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem, whose introduction does or is likely to cause economic or environmental harm or harm to human health." Federal Highway Administration guidance issued August 10, 1999 directs the use of the state's noxious weed list to define the invasive plants that must be considered as part of the National Environmental Policy Act analysis for a proposed project.

Affected Environment

Caltrans prepared two biological reports for this project: a Biological Assessment was prepared in August 2007 and a Natural Environment Study was prepared in February 2008.

Invasive plant species refers to a species that has moved into an area and reproduced so aggressively that it has replaced some of the original species. Invasive species were identified within the Biological Study Area: yellow star-thistle *(Centaurea solstitialis)*, bermudagrass, Johnsongrass *(Sorghum halepense)*, puncturevine, and common Russian thistle. These plant species were identified on the State of California, Department of Food and Agriculture Noxious Weed List (updated May 17, 2004). These plant species were categorized as "C" species, which means that they are not subject to state enforcement except to provide for pest cleanliness in nurseries. There are no invasive species identified on the federal weed list (updated September 8, 2000).

Environmental Consequences

Five invasive plant species were identified within the Biological Study Area. Some of these invasive plant species may be removed due to the construction of the project.

Avoidance, Minimization, and/or Mitigation Measures

In compliance with the Executive Order on Invasive Species, Executive Order 13112, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project would not use species listed as noxious weeds. In areas of particular sensitivity, extra precautions would be taken if invasive species were found in or adjacent to the construction areas. These include the

inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

2.4 Climate Change under the California Environmental Quality Act

Regulatory Setting

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change, the efforts devoted to greenhouse gas emissions reduction and climate change research and policy have increased dramatically in recent years. In 2002, with the passage of Assembly Bill 1493, California launched an innovative and pro-active approach to dealing with greenhouse gas emissions and climate change at the state level. Assembly Bill 1493 requires the Air Resources Board to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year; however, in order to enact the standards California needed a waiver from the U.S. Environmental Protection Agency. The waiver was denied by the U.S. Environmental Protection Agency in December 2007 and efforts to overturn the decision have been unsuccessful.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's greenhouse gas emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80% below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32, the Global Warming Solutions Act of 2006. Assembly Bill 32 sets the same overall greenhouse gas emissions reduction goals while further mandating that Air Resources Board create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing Assembly Bill 32, including the recommendations made by the state's Climate Action Team.

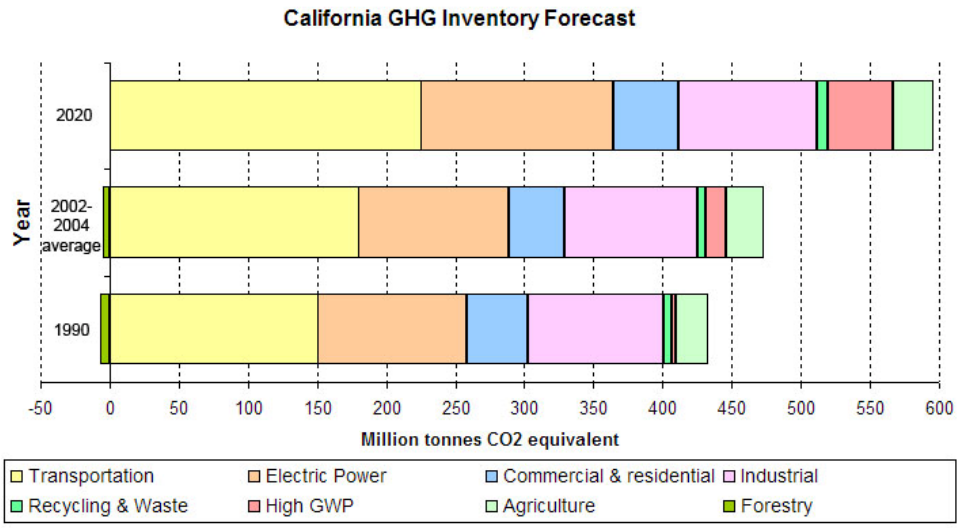
With Executive Order S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this executive order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Climate change and greenhouse gas reduction is also a concern at the federal level; at this time, no legislation or regulations have been enacted specifically addressing greenhouse gas emissions reductions and climate change. However, California, in conjunction with several environmental organizations and several other states, sued to force the U.S. Environmental Protection Agency to regulate greenhouse gases as a pollutant under the Clean Air Act (*Massachusetts vs. Environmental Protection Agency et al.,* 549 U.S. 497 (2007). The court ruled that greenhouse gases do fit within the Clean Air Act's definition of a pollutant, and that U.S. Environmental Protection Agency does have the authority to regulate greenhouse gases. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting greenhouse gas emissions.

Affected Environment

According to *Recommendations by the Association of Environmental Professionals on How to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), an individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases. As discussed in the "Limitations and Uncertainties with Modeling" and the "Limitations and Uncertainties with Impact Assessment" sections below, the task of trying to determine an individual project's contribution to climate change is daunting.

As part of its supporting documentation for the Draft Scoping Plan, the California Air Resources Board recently released an updated version of the greenhouse gas inventory for California (June 26, 2008). Shown below is a graph from that update that shows the total greenhouse gas emissions for California for 1990, 2002-2004 average, and 2020 projected if no action is taken.

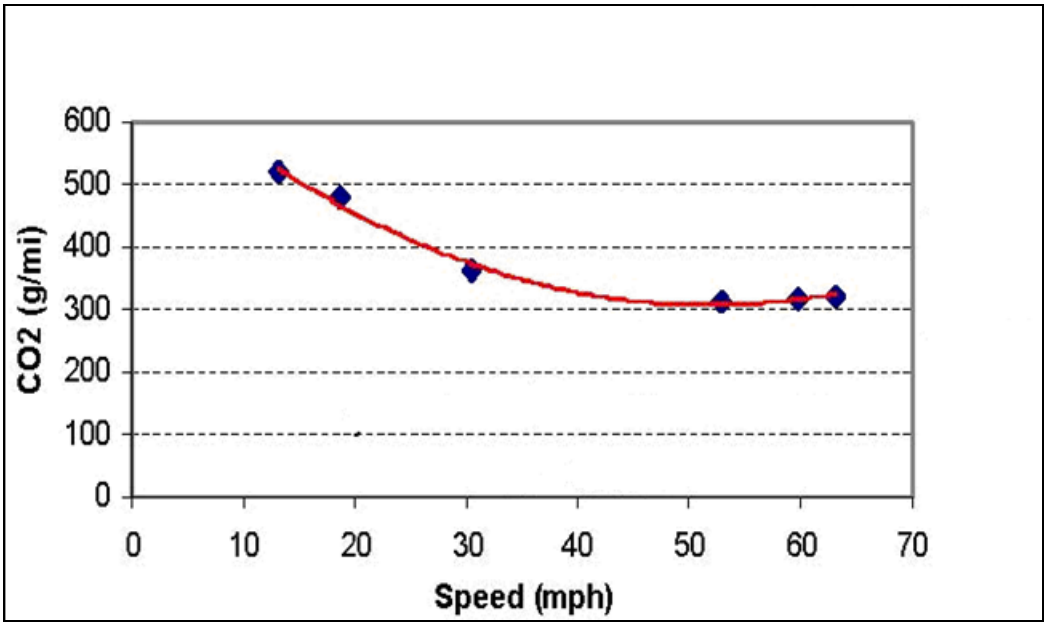


California Greenhouse Gas Inventory
Taken from: http://www.arb.ca.gov/cc/inventory/data/forecast.htm

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing greenhouse gas emissions reduction and climate change. Recognizing that 98 percent of California's greenhouse gas emissions are from the burning of fossil fuels and 40 percent of all human-made greenhouse gas emissions are from transportation, Caltrans has created and is implementing the *Climate Action Program at Caltrans* that was published in December 2006. This document can be found at: http://www.dot.ca.gov/docs/ClimateReport.pdf.

Transportation's contribution to greenhouse gas emissions is dependent on three factors: the types of vehicles on the road, the type of fuel the vehicles use, and the time/distance the vehicles travel. One of the main strategies in Caltrans' Climate Action Program to reduce greenhouse gas emissions is to make California's transportation system more efficient. The highest levels of carbon dioxide from mobile sources, such as automobiles, occur at stop-and-go speeds (0-25 miles per hour) and speeds over 55 miles per hour; the most severe emissions occur from 0-25 miles per hour (see Figure 2-7 below). Relieving congestion by enhancing operations and improving travel times in high congestion travel corridors will lead to an overall reduction in greenhouse gas emissions.

Figure 2-7 Fleet Carbon Dioxide (CO2) Emissions vs. Speed (Highway)



Source: Center for Clean Air Policy— http://www.ccap.org/Presentations/Winkelman%20TRB%202004%20(1-13-04).pdf

To the extent that a project relieves congestion by enhancing operations and improving travel times in high congestion travel corridors greenhouse gas emissions, particularly carbon dioxide, will be reduced. This project would reduce congestion and increase capacity to meet existing and projected traffic volumes. The additional lanes would be constructed mostly in the median throughout the project limits, which keeps future traffic towards to the median instead of to the outside. Transportation Systems Management strategies, such as weaving lanes near interchanges, were incorporated into the project to increase the number of vehicle trips without increasing lanes to the project.

The Tulare County 2007 Regional Transportation Plan's Final Environmental Impact Report dated May 2007 discusses the Global Warming Solutions Act of 2006, signed and passed into law by Governor Arnold Schwarzenegger on September 27, 2006. The Act establishes greenhouse gasses emissions targets by requiring that California's global warming emissions be reduced to 1990 levels by 2020. The Act has three main parts: (1) emissions reporting requirements, (2) adoption of enforceable emission limits, and (3) development of the State scoping plan. According to the Report, the agencies with jurisdiction over air quality regulation and greenhouse gas emissions

have not established regulations, guidance, methodologies, significant thresholds, standards, California Environmental Quality Act protocols or mitigation measures that specify the type of analysis, or mitigation measures, that can be included in a program or other environmental document. Tulare County Association of Governments will adhere to the rules and guidelines currently in place at the local, state, and federal level, and to any future relocations regarding global warming resulting from the legislative approval of Assembly Bill 32 and Assembly Bill 1493, when available.

Early in the process, Caltrans developed a purpose and need for this project. The purpose and need of the project, outlined in Chapter 1 of this document, is to increase capacity, improve operations, and improve safety on this stretch of State Route 99. To meet the purpose and the need of the project, three alternatives were developed. All alternatives require a six-lane facility; one alternative required a six-lane alignment on an eight-lane right-of-way. Although all build alternatives were viable alternatives, Alternatives 2 and 3 would have removed and replaced several interchanges, and required large amounts of right-of-way, mostly agricultural properties. Alternative 1, the preferred alternative, minimizes structural work and agricultural right-of-way acquisition.

According to the Tulare County 2007 Regional Transportation Plan's Final Environmental Impact, areas with the most severe traffic congestion in Tulare County are in Visalia, Tulare, and Porterville. Tulare County performed Transportation Demand Management studies that focused on managing behavior, how, when and where people travel. Tulare County recognized the need for mixed-use developments, ridesharing and alternative commuting modes as great concerns.

In Tulare County, all public mass transportation is provided by fixed route buses and dial-a-ride services. Tulare County participates in a rideshare program with Kings and Fresno counties. Amtrak, California's only operating intercity passenger rail service, serves Tulare County. Amtrak also provides a feeder bus linking Visalia with the Hanford Station in Kings County. Shared-ride taxis, car and vanpools, dial-a-ride and specialized handicapped accessible service are other forms of transportation in the area. Aviation is also available as an option as the Visalia Municipal Airport provides basic air services for people and specialty goods. Tulare County also provides non-motorized transportation in the form of pedestrian walkways and bicycle pathways.

Environmental Consequences

Caltrans has modeled the carbon dioxide emissions for Alternative 1 and the No-Build Alternative (see Table 2.21), using CT-EMFAC (Emission Factor 2007).

Table 2.21 Estimates of Carbon Dioxide Emissions

Year	No-Build		Alternative 1	
	CO2 Tons/year	VMT*	Tons/year	VMT*
2007	392	54,000	N/A	N/A
2019	444	72,000	499	72,000
2029	540	88,000	608	88,000
2039	802	108,000	745	108,000

Source: Caltrans District 6, Office of Traffic Engineering
*VMT = Vehicle Miles Traveled

The above carbon dioxide emissions numbers are only estimates and only useful for a comparison between alternatives. The estimates are not necessarily an accurate reflection of what the true carbon dioxide emissions will be because carbon dioxide emissions are dependent on other factors that are not part of the model such as the fuel mix, rate of acceleration, and the aerodynamics and efficiency of the vehicles.

CEQA Conclusion

Based on the modeled data, it would appear that the carbon dioxide emissions would initially go up for the preferred alternative just after the project was built (2019) but by 2039 the carbon dioxide emissions for the preferred alternative (745 tons/year) would fall below the 2039 No-Build conditions (802 tons/year). Based on the long-range calculation and taking into account the limitations of the model and analysis, Caltrans considers the project's contribution to climate change to be less than cumulatively considerable and not significant.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans continues to be actively involved on the Governor's Climate Action Team as Air Resources Board works to implement Assembly Bill 1493 and help achieve the targets set forth in Assembly Bill 32. Many of the strategies Caltrans is using to help meet the targets in Assembly Bill 32 come from the California Strategic Growth Plan, which is updated each year. Governor Arnold Schwarzenegger's Strategic Growth Plan calls for a $222 billion infrastructure improvement program to fortify the state's transportation system, education, housing, and waterways, including $107 in transportation funding during the next decade.

As shown on the following figure, the Strategic Growth Plan targets a significant decrease in traffic congestion below today's level and a corresponding reduction in greenhouse gases emissions. The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together yield the promised reduction in congestion. The Strategic Growth Plan relies on a complete systems approach of a variety of strategies: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements.

As part of the *Climate Action Program at Caltrans* (December 2006), Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high-density housing along transit corridors. Caltrans is working closely with local jurisdictions on planning activities; however, Caltrans does not have local land use planning authority.

Caltrans is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks. However, it is important to note that the control of the fuel economy standards is held by the U.S. Environmental Protection Agency and Air Resources Board.

Lastly, the use of alternative fuels is also being considered. Caltrans is participating in funding for alternative fuel research at the University of California at Davis. The following table summarizes Caltrans' and related statewide efforts being implemented to reduce greenhouse gas emissions. For more detailed information about each strategy, please see *Climate Action Program at Caltrans* (December 2006), available at http://www.dot.ca.gov/docs/ClimateReport.pdf."

To the extent that it is applicable or feasible for the project, the following measures can also help to reduce the greenhouse gas emissions and potential climate change impacts from projects:

1. Landscaping—reduces surface warming and through photosynthesis decreases carbon dioxide. Soundwalls would receive plants and vines, where feasible. Trees and oleander shrubs would be preserved where possible. Replacement planting would be completed within two years of the construction of this project.

2. The project would incorporate the use of energy efficient lighting, such as light-emitting diode traffic signals. Light-emitting diode bulbs — or balls, in the stoplight vernacular — cost $60 to $70 apiece but last five to six years, compared to the one-year average lifespan of their incandescent brethren. The light-emitting diode balls themselves consume 10 percent of the electricity of traditional lights.[1]

[1] Knoxville Business Journal, "Light-emitting diode Lights Pay for Themselves," May 19, 2008 at http://www.knoxnews.com/news/2008/may/19/led-traffic-lights-pay-themselves/.

Table 2.22 Caltrans Efforts to Reduce Greenhouse Gas Emissions

Strategy	Program	Partnership	Method/Process	Estimated CO2 Savings (MMT) 2010	2020
Smart Land Use	IGR	Lead: Caltrans Partner: Local Governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Lead: Caltrans Partner: Local and regional agencies & other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Lead: Regional Agencies Partner: Caltrans	Regional plans and application process	0.975	7.8
Operational Improvements and Intelligent Trans. System (ITS) Deployment	Strategic Growth Plan	Lead: Caltrans Partner: Regions	State ITS; Congestion Management Plan	.007	2.17
Mainstream Energy and greenhouse gas into Plans and Projects	Office of Policy Analysis & Research; Division of Env. Analysis	Interdepartmental effort	Policy establishment, guidelines, technical assistance	Not Estimated	Not Estimated
Educational and Information Program	Office of Policy Analysis & Research	Partner: Interdepartmental, CalEPA, CARB, CEC	Analytical report, data collection, publication, workshops, outreach	Not Estimated	Not Estimated
Fleet Greening and Fuel Diversification	Division of Equipment	Department of General Services	Fleet Replacement B20 B100	0.0045	0.0065 0.45 .0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team	Energy Conservation Opportunities	0.117	.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries	2.5 % limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix	1.2 .36	3.6
Goods Movement	Office of Goods Movement	CalEPA, CARB, BT&H, MPOs	Goods Movement Action Plan	Not Estimated	Not Estimated
Total				2.72	18.67

Chapter 3 Comments and Coordination

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures, and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including project development team meetings and interagency coordination meetings. This chapter summarizes the results of Caltrans' efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

Local Agency Coordination Meetings

November 20, 2003

Caltrans, Tulare County, the City of Tulare, and the Tulare County Association of Governments discussed proposed design concepts for the J Street, Avenue 246, and Tagus area. At the end of the meeting, Caltrans was able to further work on viable alternative designs.

June 13, 2007

Caltrans, Tulare County, the City of Tulare, and the Tulare County Association of Governments again discussed design concepts for the J Street, Avenue 256, and Tagus area. A proposed design concept was accepted by the Project Development Team. This design would be shown at the public hearing anticipated in summer 2008.

Public Information Meeting – October 16, 2003

Approximately 34 people attended the public information meeting at Community Service and Employment Training, 30498 Diagonal 69, Goshen, California. Informational display boards with maps, cross-sections and graphics were viewed. Project team members were available to explain the displays, answer questions, and receive public input. Attendees were encouraged to submit written comments on forms provided at the public comment station or to mail them to Caltrans at a later date. Caltrans received three public comments at the meeting. All comments requested to be added to the project mailing list. One resident expressed his gratitude for the meeting. One comment expressed concern over the Betty Drive interchange and the potential need for right-of-way in that area.

Public Hearing – August 28, 2008

A public hearing was held on August 28, 2008, from 4:00 p.m. to 7:00 p.m. at Lincoln Elementary School at 909 E. Cedar Avenue in Tulare, California. To announce the event, Caltrans published public notices in the *Visalia Times-Delta* and *Tulare Advance-Register* on August 7, 2008 and August 21, 2008, and in *El Sol* on August 15, 2008. Invitations were sent to local agencies and elected officials as well as to property owners affected by the project.

The format of the public hearing followed that of an open house. No formal presentation was given; visitors were free to roam the room, view the information displayed, and ask questions.

Caltrans staff representing Project Management, Design, Environmental, Right-of-Way, and the Public Information Office were available to answer questions on the project. Information boards were displayed around the room, and project maps were displayed in the center of the room. Visitors were encouraged to comment on the project by completing a comment card, writing Caltrans, emailing Caltrans, or voicing their comments to the court reporter available at the public hearing.

Nine visitors signed the sign-in sheet. Two comment cards, one letter by mail, and one comment submitted to the court reporter was also received. Copies of the comments and Caltrans' responses to the comments are provided in Appendix I of this document.

Caltrans received four phone calls to Project Manager Phillip Sanchez, and they are summarized below.

August 14, 2008

Project Manager Phillip Sanchez received a phone call from Ziva Krstic, a property owner in Goshen, California. Mr. Krstic received the Notice of Availability of the draft environmental document and Announcement of Public Hearing. He stated that more lanes would result in more traffic and more noise. He believes that Caltrans should not build more lanes and, if Caltrans does construct additional lanes, Caltrans should construct a soundwall along his residence. Mr. Krstic stated that highway noise is already too loud at his residence and asked how high Caltrans builds soundwalls. Project Manager Phillip Sanchez told Mr. Krstic that Caltrans needs to construct additional lanes on State Route 99 because the freeway will have very large increases in traffic volumes in the future whether or not Caltrans increases the capacity.

Mr. Sanchez stated that Caltrans noise studies show high noise levels in the Goshen area near his residence. According to Federal Emergency Management Agency Flood Insurance Rate Mapping, the Goshen area is designated as a floodplain area. For this reason, Caltrans does not propose soundwalls for this area. In addition, the Goshen area does not possess a storm drainage system. The lack of a storm drainage system and the construction of a soundwall could make any minor flooding worse. Mr. Krstic responded that for the last four years, it has been a very dry climate in the area. Mr. Sanchez reminded him of the statewide flooding in 1995 and 1998 where California had flooding in areas that were not typical. Mr. Sanchez stated that Caltrans needs to be prepared for the long-term.

Mr. Sanchez told Mr. Krstic that Caltrans soundwalls are typically 10 to 14 feet high and encouraged him to attend the public hearing on August 28, 2008 in Tulare.

August 22, 2008
Project Manager Phillip Sanchez received a phone call from Graham Allen, who identified himself as the owner of the Visalia Harley Davidson motorcycle dealership along the State Route 99 westside frontage road in Goshen. Mr. Allen asked if the frontage road would be affected by the project. Project Manager Phillip Sanchez responded that the project would not affect the existing frontage roads in Goshen and encouraged Mr. Allen to attend the public hearing in Tulare. Mr. Allen replied that he would be out of town on the day of the public hearing.

August 22, 2008
Project Manager Phillip Sanchez received a phone call from Stan Bill Beck. Mr. Beck asked if Caltrans needed right-of-way where there are homes along the frontage road ½ mile south of Caldwell Avenue on the east side of State Route 99. Project Manager Phillip Sanchez responded that there would be no acquisition in that area because Caltrans is widening toward the median at that location. Caltrans would avoid impacts to homes and the existing frontage road. Mr. Sanchez encouraged Mr. Beck to attend the public hearing.

September 4, 2008
Project Manager Phillip Sanchez received a phone call from Ramdas Darke, who identified himself as the owner of a motel in Tagus, near Avenue 264 at 26442 N. 99 Highway. Mr. Darke is planning to do some work on the motel and asked how much property Caltrans would need for the project. Project Manager Phillip Sanchez acknowledged that Caltrans would need an approximate 80-foot strip (approximately

½ acre) of his property parallel to State Route 99 and the frontage road. The frontage road would be shifted toward his property.

On the morning of September 8, 2008, Mr. Darke stopped by the Caltrans offices in Fresno, California. Mr. Darke stated that he recently acquired the motel property at Tagus and requested that Caltrans minimize the right-of-way acquired from his property. Mr. Sanchez showed Mr. Darke a map with the proposed right-of-way acquisition from the motel property and explained that Caltrans would acquire an 80-foot strip of the motel property along the frontage road. The purpose of the acquisition is to accommodate buried gas line relocation and to shift the frontage road away from the freeway. Mr. Sanchez explained that the current schedule shows acquisition to begin in 2011. Mr. Sanchez gave Mr. Darke a copy of the preliminary design map for his information with his business card attached. Mr. Sanchez stated that right-of-way acquisition and construction dates depend on funding availability.

Farmland – Natural Resources Conservation Service, Tulare County

May 2008

A Farmland Conversion Impact Rating for Corridor Type Projects, the Natural Resources Conservation Service Form 1006 was prepared and sent to the Natural Resources Conservation Service in May 2008. Of the total right-of-way (48.44 acres) acquired, 6.6 acres of farmland would be acquired for this project.

California Department of Fish and Game

July 9, 2003

Caltrans and Mr. Clarence Mayott, Environmental Scientist, conducted a field site visit of the proposed project and discussed the following:

Waterways

Several waterways within the project limits were examined. These waterways appeared to be used to convey irrigation water and are maintained on a regular basis. Mr. Mayott stated that a notification/1602 Streambed Alteration Agreement would be required for work within these waterways. In addition, he stated that nesting birds (swallows) would need to be protected from construction on bridges within the project area.

Swainson's hawk

Caltrans told Mr. Mayott that a Swainson's hawk survey was conducted for the project in March-April 2003 and no Swainson's hawk or nests were observed during

this survey. However, Caltrans stated that active red-tailed hawk (*Buteo jamaicensis*) nests were observed during this survey in eucalyptus trees within the median of State Route 99, and in eucalyptus and valley oak trees (*Quercus lobata*) adjacent to State Route 99. Mr. Mayott stated that the best situation would be to conduct the tree removal and construction activities outside of the nesting season. However, if construction is going to be conducted during the nesting season, he stated that active raptor nests would need to be monitored to make sure that construction activities would not disrupt their nesting behavior.

Mr. Mayott was concerned with the large number of eucalyptus trees that would be removed from the median to accommodate the two-lane addition. He stated that these trees provide important nesting habitat for raptors and compensation for these trees would be required.

September 19, 2005
Caltrans spoke with Mr. Eric Kleinfelter, Associate Wildlife Biologist/Sequoia District. Caltrans described the project to Mr. Kleinfelter and asked him if he had any biological concerns with the project. He stated that he did not have any concerns with the Swainson's hawk since none were observed during the survey in 2003. However, Mr. Kleinfelter has observed active hawk nests within the project area within the median of State Route 99. He recommended that active hawk nests be monitored during construction. Mr. Kleinfelter expressed concern with the construction of a median barrier within the project limits. He stated that such a barrier could impede the movement of mammals such as the San Joaquin kit fox and gray fox (*Urocyon cinereoargenteus*). He would like to see a median barrier design that would allow for the movement of wildlife across State Route 99. Caltrans asked Mr. Kleinfelter if he knew of any San Joaquin kit fox occurrences within the vicinity of the proposed project. He stated that he was not aware of any recent San Joaquin kit fox occurrences within the project area. Mr. Kleinfelter stated that he did not have any other biological concerns due to the disturbed nature of the habitat within the project area.

March 28, 2006
Caltrans spoke with Mr. Mayott and he made the following recommendations:

- A pre-construction survey for nesting Swainson's hawk should be completed prior to construction.
- Avoidance of active nests during the nesting season is preferred in all cases. The avoidance buffer for an active Swainson's hawk nest is 0.25 mile.

- If a hawk nest were lost during the removal of a non-native tree (including eucalyptus) then the California Department of Fish and Game would require the habitat be replaced by planting native trees within the project area. Caltrans would be required to prepare a revegetation plan to be reviewed by the California Department of Fish and Game.
- Oak (*Quercus* sp.) trees removed during construction would require mitigation: 10:1 for oaks greater than 24 inches diameter at breast height, 5:1 for diameter breast height between 10 to 24 inches, and 3:1 for oaks with a diameter breast height less than 10 inches.
- Non-oak native trees would require a 3:1 replacement ratio.

December 1, 2006
Caltrans spoke with Ms. Annette Tenneboe, Environmental Scientist. Caltrans described the project to Ms. Tenneboe and requested information on projects that California Department of Fish and Game is reviewing within the vicinity of the project. Ms. Tenneboe told Caltrans that she reviewed a project proposed by Tulare County a few years ago in the community of Goshen near Betty Drive. She stated that San Joaquin kit fox surveys were conducted in 2001 to 2003 and a San Joaquin kit fox was observed. Ms. Tenneboe also mentioned that the City of Visalia conducted San Joaquin kit fox surveys at the airport and surrounding lands in the early 1990s. She stated that San Joaquin kit fox were observed west of the State Route 99/198 interchange. Ms. Tenneboe referred Caltrans to Mr. Justin Sloan who is currently reviewing projects within Tulare County.

December 1, 2006
Caltrans spoke with Mr. Justin Sloan, Environmental Scientist. Caltrans described the project to Mr. Sloan and requested information on projects that he is currently reviewing within the vicinity of the project. Mr. Sloan told Caltrans that he submitted a comment letter to Smee Builders. Smee Builders is proposing to build a residential development called Cottontail Hallow. The proposed project is located east of the community of Goshen at the northwest and southwest corner of Road 76 and Avenue 308. The proposed project would develop 82 acres. Mr. Sloan was going to look through his files to see if there were any other proposed development projects within the vicinity of the project. He was also going to try to find additional information on the San Joaquin kit fox surveys conducted in Tulare County from 2001 to 2003.

December 13, 2006
Mr. Sloan faxed Caltrans a report entitled *"Preconstruction Survey Results for San*

Joaquin kit fox on the Betty Drive/Avenue 312 Realignment and Improvement Project, Tulare County, California." This report was prepared for the Tulare County Resource Management Agency, Community Development and Redevelopment Division by Visgar & Associates Environmental Consulting. Mr. Sloan stated that he was unaware of any other proposed development projects within the vicinity of the Tulare to Goshen Six-Lane project.

June 19, 2007
Caltrans spoke with Ms. Wendy Cabrera, Staff Services Analyst. Ms. Cabrera said that a minimum 600-foot avoidance buffer would need to be established around an active Swainson's hawk nest. The nest would need to be monitored and she recommended that Caltrans obtain a 2081 permit. She said that no action would need to be taken if the nest is located greater than 0.25 mile from construction activities.

U.S. Fish and Wildlife Service

July 9, 2003
Caltrans contacted Ms. Susan Jones via electronic mail (e-mail) to request a field visit to review the Goshen to Tulare Six-Lane projects.

July 28, 2003
Ms. Jones contacted Caltrans via e-email requesting the following project items to determine whether a field site visit was necessary: location, California Natural Diversity Database sightings in the area, land use in the area, and potential issues that could be addressed in the field.

August 14, 2003
Caltrans contacted Ms. Jones via e-mail requesting technical assistance on the Goshen to Tulare Six-Lane project: San Joaquin kit fox surveys for Goshen to Tulare Six-Lane Project. Caltrans was planning to infer presence since the proposed project is located within the historic range of the San Joaquin kit fox and there are several California Natural Diversity Database occurrences adjacent to the proposed project. Therefore a San Joaquin kit fox survey would not be performed.

Caltrans also stated that the following information was sent to Ms. Jones: 1) a California Natural Diversity Database 10-mile query map, 2) photographs of the project area, 3) aerial mapping with the project design, 4) project description, 5) land use within the project area and the surrounding area, and 6) a species list.

August 10, 2007
Request to initiate Section 7 consultation with the U.S. Fish and Wildlife Service for the Tulare to Goshen Six-Lane Project.

January 28, 2008
Letter sent to U.S. Fish and Wildlife Service to update the project description (included additional soundwall and weaving lanes) and requesting compensatory mitigation for the San Joaquin kit fox mitigation in the Biological Assessment.

February 21, 2008
Received the Biological Opinion from the U.S. Fish and Wildlife Service.

Endangered Species Recovery Program

April 14, 2006
Caltrans contacted Dr. Brian L. Cypher via e-mail to discuss the use of a concrete median barrier within the project limits. Caltrans provided three types of concrete median barrier designs that allowed for wildlife passage and requested that Dr. Cypher provide a recommended distance to place the breaks within the concrete median barrier. In addition, Caltrans requested that Dr. Cypher provide a recommended width of the break.

April 15, 2006
Dr. Cypher contacted Caltrans via e-mail. Dr. Cypher recommended fairly frequent gaps (at least every 30 feet) in the barrier due to the small amount of area between the inner lanes and the concrete median barrier. As for the size of the break, Dr. Cypher recommended a 3-foot gap that would accommodate the largest animal in the ecosystem (coyote). With six lanes of fairly heavy traffic and with animals not being able to see traffic on half of the road (due to the concrete median barrier, animals would only be able to see the three lanes on their side), Dr. Cypher questioned whether attempted crossings should be discouraged with exclusionary fencing. Dr. Cypher suggested discussing the project further with Caltrans on April 20, 2006 at California State University, Bakersfield.

April 18, 2006
Caltrans contacted Dr. Cypher via e-mail and accepted the invitation. Caltrans was going to bring aerial mapping and project designs to the meeting. Caltrans listed the following items as impeding wildlife movement across State Route 99:

- Creeks and drainages that bisect State Route 99 within the project limits do not serve as wildlife crossings when irrigation water is being conveyed in them.
- Oleanders are growing next to portions of the existing thrie-beam.
- Caltrans listed the following evidence that animals are attempting to cross State Route 99: 1) Caltrans observed a dead coyote south of the State Route 99/198 interchange. It appeared to have been hit by a vehicle; and 2) the California Department of Fish and Game observed a dead red fox (*Vulpes fulva*) within the median of the project.

Caltrans agreed with Dr. Cypher that the addition of two lanes would make it difficult for wildlife to cross State Route 99 even with breaks in the concrete median barrier. Caltrans was going to consider exclusionary fencing and breaks in the concrete median barrier in case an animal found its way onto State Route 99.

April 20, 2006
Caltrans and Dr. Cypher met at California State University, Bakersfield. Caltrans showed Dr. Cypher the project mapping. Both Caltrans and Dr. Cypher noted the disturbed nature of the habitat adjacent to the proposed project and agreed that the chance of a San Joaquin kit fox moving through the project area was low. Dr. Cypher wondered whether any action was necessary for the project. Caltrans told Dr. Cypher that it was going to conduct a drainage culvert survey to determine if animals were able to cross underneath State Route 99.

May 17, 2006
Caltrans contacted Dr. Cypher via e-mail and gave him the results of the drainage culverts survey: 1) Caltrans located a potential wildlife crossing under State Route 99 at approximately every 0.2 mile within the project limits; 2) there were some culverts that were partly or completely blocked, but Caltrans was going to recommend that these drainage culverts be cleared during construction; 3) there was irrigation water being channeled through several of the culverts; 4) the culverts ranged from 1-2 feet in height and 2-2.5 feet in width; and 5) there was a double box culvert in the middle of the project; each box culvert measured 6 feet in height and 6 feet in width. Caltrans provided additional information on the concrete median barrier design; the concrete median barrier was going to be 3 feet high and the preferred concrete median barrier design was one in which the holes were punched into the barrier. Caltrans was going to recommend that holes be placed every 0.4 mile. Caltrans requested Dr. Cypher's recommendation on this issue. Caltrans gave Dr. Cypher an update on the exclusionary fencing. Caltrans stated that this type of fencing was usually reserved

for Caltrans projects in which there was a San Joaquin kit fox migratory corridor. It was decided that this type of fencing was not warranted for the proposed project due to the potentially low numbers of kit foxes and the absence of a San Joaquin kit fox migratory corridor within the project area.

June 8, 2006

Dr. Cypher contacted Caltrans via e-mail and stated that there were a lot of uncertainties with regard to what designs and strategies would or would not work for foxes. He further stated that in the absence of good information, any modifications that Caltrans could incorporate that would increase crossing opportunities for foxes would help. Dr. Cypher stated that he has discussed the issue of medians with Caltrans and he is concerned about wildlife passageways in the median. He is concerned when a fox or other animal may make it across one side of the road and find the passageway, but the animal cannot really see whether it was clear beyond the barrier until after it has dashed through the passageway. Thus, he was beginning to have some concerns that the passageways could tempt animals to cross roadways and this could be risky. Dr. Cypher stated that the chance of a San Joaquin kit fox occurring within the proposed project area would not be great.

State Historic Preservation Office

Caltrans sent the Historic Property Survey Report to the State Historic Preservation Office on May 23, 2008 to request concurrence on the evaluation of the architectural resource(s) as not eligible for the national register.

Interagency Consultation as a Project of Air Quality Concern

The PM_{10} and $PM_{2.5}$ Hot Spot analysis was presented to the Model Coordination Committee for Interagency Consultation as a Project of Air Quality Concern on May 3, 2007. The Federal Highway Administration concurred with the assumptions and analyses on May 7, 2007. However, the U.S. Environmental Protection Agency had comments regarding tables in the Hot Spot Analysis. The Department of Transportation staff made the suggested changes and clarifications and the Hot Spot analysis was re-submitted for review on June 8, 2007. On July 12, 2007, the U.S. Environmental Protection Agency concurred that the revised document could proceed with no further comments.

Federal Highway Administration Conformity Determination

September 11, 2008

Caltrans requested by mail that the Federal Highway Administration issue a project-level conformity determination for PM 10 and PM 2.5 for the project.

October 14, 2008

The Federal Highway Administration issued a project-level conformity determination for PM 10 and PM 2.5. See Appendix H.

City of Tulare

May 16, 2008

Caltrans Environmental contacted Mark Kielty, Planning and Building Director for the City of Tulare, for current information on either approved applications or applications that are being processed, the proposed use, and the status. Mark Kielty responded quickly with a document entitled Cumulative Projects that contained economic development projects, General Plan Amendment information, Zoning Amendment information, and proposed subdivision plans.

County of Tulare

May 16, 2008

Caltrans Environmental contacted Charlotte Brusuelas, County of Tulare and requested current information on either approved applications or pending applications for development projects, such as residential/commercial. Caltrans requested proposed use, and the status of the projects that may affect State Route 99 and surrounding area.

May 17, 2008

Charlotte Brusuelas responded to the May 26, 2008 request and stated that there is not that much development within the project limits. Ms. Brusuelas said that the project area is 90 percent agriculture and Tulare County is striving to keep agriculture intact. She said that there is a commercial/industrial subdivision planned directly adjacent to State Route 99 in Goshen. There is a residential subdivision in Goshen. At the Caldwell/State Route 99 northeast quadrant, the county received an application for a proposed paintball park. The application is under review.

City of Visalia

May 19, 2008

Caltrans Environmental contacted Paul Scheibel, Principal Planner, City of Visalia

requesting a list of large "up and coming projects (such as development projects - residential, commercial) that may affect State Route 99 and surrounding areas.

May 27, 2008
Caltrans received a list of recent projects and activities within the project area from Janet Jiggerian of the City of Visalia offices.

Tulare County – Agricultural Program

April 30, 2008
Caltrans Environmental contacted Ann Chapman, Agricultural Programs in Tulare County, for Williamson Act mapping for the Tulare to Goshen Six-Lane Project.

May 21, 2008
Maria Santos-Silva, also with Agricultural Programs in Tulare, contacted Caltrans Environmental with Williamson Act information. She said that there were a lot of farmland parcels that are under contract adjacent to the highway. Agricultural Programs staff would provide Caltrans with Williamson Act mapping.

June 12, 2008
Received Williamson Act mapping from Agricultural Programs in Tulare County.

Union Pacific Railroad

September 29, 2008
Caltrans contacted Jefferey Breeder of the Union Pacific Railroad and requested a permit to enter for hazardous waste testing along the railroad tracks. As of October 17, 2008, Caltrans has not received a response from the Union Pacific Railroad.

Chapter 4 List of Preparers

This document was prepared by the following Caltrans Central Region staff:

Allam Alhabaly, Transportation Engineer. B.S., Industrial Engineering, California State University, Fresno; 8 years environmental technical studies experience. Contribution: Noise Report

Bryan Apper, Senior Environmental Planner. M.A., Environmental Planning, California State University Consortium, Long Beach; B.A., English, California State University, Northridge; 27 years environmental and transportation planning experience. Contribution: Quality review.

Henry Barnes, Landscape Associate, B.A. Landscape Architecture, California Polytechnic State University, San Luis Obispo; 3 years experience in landscape architecture; 1 year visual impact assessment experience. Contribution: Visual Impact Assessment.

Jeanne Binning, Senior Environmental Planner. Ph.D., Anthropology, University of California, Riverside; B.A., Anthropology, California State University, Northridge; 37 years cultural resources management experience. Contribution: Principal Investigator, Prehistoric Archaeology.

Louis L. Birdwell, Associate Right-of-Way Agent, B.A., Banking and Finance, Texas Technology University; 18 years with Caltrans Right-of-Way. Contribution: Draft Relocation Impact Report.

Christopher Brewer, Associate Environmental Planner (Architectural History), M.A., Public Administration, California State University, Bakersfield; 26 years experience in architectural history. Contribution: Historic Resource Evaluation Report.

Abdulrahim Chafi, Transportation Engineer. Ph.D., Environmental Engineering, California Coast University, Santa Ana; B.S., M.S., Chemistry and M.S. Civil/Environmental Engineering, California State University, Fresno; 12 years environmental technical studies experience. Contribution: Emission Factors (EMFAC) Study.

Catharine C. Crandall, Graphic Designer II. B.A., Fine Arts, New York State University, Louisiana State University; 8 years of graphic artist/illustrator experience. Contribution: Graphics.

Rajeev Dwivedi, Associate Engineering Geologist. Ph.D., Environmental Engineering, Oklahoma State University, Stillwater; 16 years environmental technical studies experience. Contribution: Water Quality Report.

Gary Gagliolo, Associate Environmental Planner. B.A., Biological Science with emphasis in molecular biology, California State University, San Jose; 21 years environmental health, 2 years water quality, 5 years hazardous waste and environmental planning experience. Contribution: Hazardous Waste Report.

Sarah Gassner, Chief, Southern Sierra Environmental Analysis Branch. B.A., Anthropology, California State University, Fresno; M.A., Cultural Resources Management, Sonoma State University; 12 years archaeological experience; 7 years cultural resource management and environmental planning experience with Caltrans. Contribution: Environmental Unit Supervisor.

Theresa Goewert, Air Quality Specialist. B.S., Food Science, Colorado State University; 3 years environmental planning experience, 8 years air quality experience. Contribution: Air Quality Report.

Peter Hansen, Engineering Geologist, P.G.; B.S., Geology, California State University, Fresno; 1 year hazardous waste experience, 7 years paleontology/geology experience. Contribution: Paleontology Report.

Agnes Jenkins, Senior Transportation Engineer. B.S., Civil Engineering, California State University, Fresno; 12 years environmental technical studies experience. Contribution: Air Quality Conformity

Rachel Kleinfelter, Associate Environmental Planner. B.A., Environmental Studies, Mills College; 13 years biology experience. Contribution: Natural Environment Study and Biological Assessment.

Joseph Llanos, Graphic Designer I. B.A., Graphic Design, California State University, Fresno; 12 years visual design and public participation experience. Contribution: Prepared graphics.

Judith Lopez, Associate Environmental Planner. B.S., Business Administration, California State University, Fresno; 9 years environmental planning experience. Contribution: Initial Study/Environmental Assessment.

Ramon Lopez, P.E., Transportation Engineer. B.S., Civil Engineering, San Diego State University, San Diego; 10 years of Design Construction and Hydraulics Engineering experience. Contribution: Location Hydraulic Study and Floodplain Evaluation.

Bao Luong, P.E., Transportation Engineer. M.S., Civil Engineering, Portland State University; 7 years traffic engineering experience. Contribution: Update Operational Analysis.

Michelle Miller, Environmental Planner (Archaeology). B.A., Anthropology, California State University, Fresno; 2 years experience in archaeology. Contribution: Negative Archaeological Survey Report and Historic Property Survey Report.

Heidi Misslbeck, Landscape Associate. M.L.A., Landscape Architecture, University of Pennsylvania; B.A., Landscape Architecture, Colby College; 11 years landscape architecture experience and 10 years planning experience. Contribution: revisions to Visual Impact Assessment.

Phillip Sanchez, P.E., Project Manager. B.S., Civil Engineering, University of New Mexico; 16 years of construction and design experience, and 8 years of project management experience. Contribution: Project Manager.

Miguelito Santos, P.E., Transportation Engineer. B.S., Civil Engineering, Mapua Institute of Technology, Manila, Philippines; 9 years of design and project development experience. Contribution: Design Engineer.

Kimely Sawtell, Associate Environmental Planner. M.A., Geography, California State University, Fresno; B.S., Geography, California State University, Fresno; 9 years environmental planning experience. Contribution: Quality review.

Roger Valverde, Graphic Designer II. Certificate of Multimedia, Mount San Jacinto and California State University, Fresno; 25 years visual design and public participation experience. Contribution: prepared graphics.

Dan Waterhouse, Associate Environmental Planner. B.S., Business Administration, California State University, Fresno; 19 years environmental analysis experience. Contribution: Quality review.

Appendix A California Environmental Quality Act Checklist

The following checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. The California Environmental Quality Act impact levels include "potentially significant impact," "less than significant impact with mitigation," "less than significant impact," and "no impact."

Supporting documentation of all California Environmental Quality Act checklist determinations is provided in Chapter 2 of this Initial Study/Environmental Assessment. Documentation of "No Impact" determinations is provided at the beginning of Chapter 2. Discussion of all impacts and avoidance, minimization, and/or mitigation measures is under the appropriate topic headings in Chapter 2.

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
AESTHETICS - Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	X	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	☐	☐	X	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	X	☐
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	X	☐
AGRICULTURE RESOURCES - In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	X	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	X	☐
c) Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	X
AIR QUALITY - Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	X
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	X
d) Expose sensitive receptors to substantial pollutant concentration?	☐	☐	☐	X
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	X
BIOLOGICAL RESOURCES - Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	X	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	X	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	X
CULTURAL RESOURCES - Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Archaeological resources are considered "historical resources" and are covered under a).			
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	X	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	X
GEOLOGY AND SOILS - Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	X
ii) Strong seismic ground shaking?	☐	☐	☐	X
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	X
iv) Landslides?	☐	☐	☐	X
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	X
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.	☐	☐	☐	X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	X
HAZARDS AND HAZARDOUS MATERIALS - Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	X
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	X
c) Emit hazardous emissions or handle hazardous or acutely hazardous material, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	X
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	X
HYDROLOGY AND WATER QUALITY - Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	X
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on or offsite?	☐	☐	☐	X
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or offsite?	☐	☐	☐	X
e) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	X
f) Otherwise substantially degrade water quality?	☐	☐	☐	X
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	X
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	X	☐

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	X
j) Result in inundation by a seiche, tsunami, or mudflow?	☐	☐	☐	X
LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?	☐	☐	☐	X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	X
MINERAL RESOURCES - Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	X
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	X
NOISE - Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	X	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	X	☐

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	X	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	X
POPULATION AND HOUSING - Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X
PUBLIC SERVICES -				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	X
Police protection?	☐	☐	☐	X
Schools?	☐	☐	☐	X
Parks?	☐	☐	☐	X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
Other public facilities?	☐	☐	☐	X
RECREATION -				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	X
TRANSPORTATION/TRAFFIC - Would the project:				
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☐	X
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	X
e) Result in inadequate emergency access?	☐	☐	☐	X
f) Result in inadequate parking capacity?	☐	☐	☐	X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	X
UTILITY AND SERVICE SYSTEMS - Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	X	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	X
e) Result in determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	X
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	X
MANDATORY FINDINGS OF SIGNIFICANCE -				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	X
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	X
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	X

Appendix B Title VI Policy Statement

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-5266
FAX (916) 654-6608
TTY (916) 653-4086

Flex your power!
Be energy efficient!

January 14, 2005

TITLE VI
POLICY STATEMENT

The California Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, and age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

WILL KEMPTON
Director

"Caltrans improves mobility across California"

Appendix C Summary of Relocation Benefits

California Department of Transportation Relocation Assistance Program

Relocation Assistance Advisory Services

The California Department of Transportation (Caltrans) would provide relocation advisory assistance to any person, business, farm, or non-profit organization displaced as a result of Caltrans' acquisition of real property for public use. Caltrans would assist residential displacees in obtaining comparable decent, safe, and sanitary replacement housing by providing current and continuing information on sales prices and rental rates of available housing. Non-residential displacees would receive information on comparable properties for lease or purchase.

Residential replacement dwellings would be in equal or better neighborhoods, at prices within the financial means of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, displacees would be offered comparable replacement dwellings that are open to all persons regardless of race, color, religion, sex, or national origin, and are consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance would also include supplying information concerning federal- and state-assisted housing programs, and any other known services being offered by public and private agencies in the area.

Residential Relocation Payments Program

For more information or a brochure on the residential relocation program, please contact Judith Lopez at judith_lopez@dot.ca.gov, (559) 243-8297, or 2015 E. Shields Avenue, Suite 100, Fresno, CA 93726.

The brochure on the residential relocation program is also available in English at http://www.dot.ca.gov/hq/row/pubs/residential_english.pdf and in Spanish at http://www.dot.ca.gov/hq/row/pubs/residential_spanish.pdf.

If you own or rent a mobile home that may be moved or acquired by Caltrans, a relocation brochure is available in English at http://www.dot.ca.gov/hq/row/pubs/mobile_eng.pdf and in Spanish at http://www.dot.ca.gov/hq/row/pubs/mobile_sp.pdf.

Business and Farm Relocation Assistance Program

For more information or a brochure on the relocation of a business or farm, please contact Judith Lopez at judith_lopez@dot.ca.gov, (559) 243-8297, or 2015 E. Shields Avenue, Suite 100, Fresno, CA 93726.

The brochure on the business relocation program is also available in English at http://www.dot.ca.gov/hq/row/pubs/business_farm.pdf and in Spanish at http://www.dot.ca.gov/hq/row/pubs/business_sp.pdf.

Additional Information

The information above is not intended to be a complete statement of all of Caltrans' laws and regulations. At the time of the first written offer to purchase, owner-occupants are given a more detailed explanation of the state's relocation services. Tenant occupants of properties to be acquired are contacted immediately after the first written offer to purchase, and also given a more detailed explanation of Caltrans' relocation programs.

No relocation payment received would be considered as income for the purpose of the Internal Revenue Code of 1954 or for the purposes of determining eligibility or the extent of eligibility of any person for assistance under the Social Security Act or any other federal law (except for any federal law providing low-income housing assistance).

Persons who are eligible for relocation payments and who are legally occupying the property required for the project would not be asked to move without being given at least 90 days advance notice, in writing. Occupants of any type of dwelling eligible for relocation payments would not be required to move unless at least one comparable "decent, safe, and sanitary" replacement residence, open to all persons regardless of race, color, religion, sex, or national origin, is available or has been made available to them by the state.

Any person, business, farm, or non-profit organization, which has been refused a relocation payment by Caltrans, or believes that the payments are inadequate, may appeal for a hearing before a hearing officer or the Caltrans' Relocation Assistance Appeals Board. No legal assistance is required; however, the displacee may choose to obtain legal council at his/her expense. Information about the appeal procedure is available from Caltrans' Relocation Advisors.

Important Notice

To avoid loss of possible benefits, no individual, family, business, farm, or non-profit organization should commit to purchase or rent a replacement property without first contacting a Department of Transportation relocation advisor at:

State of California
Department of Transportation, District #6
Relocation Assistance Program
Tower Building
855 M Street, 3rd Floor
Fresno, CA 93721

Appendix D Minimization and/or Mitigation Summary

Relocations

Caltrans would coordinate the purchase of land adjacent to the business for additional parking. If this were not successful, the business would be entitled to relocation assistance. Displaced businesses are entitled to reimbursement for actual reasonable expenses incurred in searching for a replacement property or aid in locating suitable replacement property. Refer to Appendix C for a summary of the Relocation Assistance Program. The available relocation resources would be addressed in detail in the Final Relocation Impact Report.

Any person (individual, family, corporation, partnership, or association) who moves from real property or moves personal property from real property as a result of the acquisition of the real property, or is required to relocate as a result of a written notice from the California Department of Transportation from real property required for a transportation project, is eligible for "Relocation Assistance." All activities would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (refer to Section 2.1.1.1.) and see Appendices B and C, for more information.

Air Quality

The provisions of the Department of Transportation Standard Specifications, Section 7-1.01F "Air Pollution Control" and Section 10 "Dust Control" requires the contractor to comply with the San Joaquin Valley Unified Air Pollution Control District's rules, ordinances, and regulations. With respect to diesel emissions during construction, the Department of Transportation would take all minimization measures that are listed in the Standard Specifications to reduce particulate matter emissions. A dust control plan is required for this project and would be submitted to the San Joaquin Valley Unified Air Pollution Control District before construction begins. Typical dust and emission control methods include watering the construction site, cleaning paved streets, providing runoff and erosion control, using traps on diesel exhaust systems, and using emission control retrofits on older, higher polluting vehicles.

In the San Joaquin Valley Air Pollution Control District, an Air Impact Analysis for the Indirect Source Review (Rule 9510) must be submitted for evaluation of potential

construction emissions of PM_{10} and oxides of nitrogen. The Air Impact Analysis would calculate emissions resulting from only the construction phase of this project. Mitigation is required in the form of payment for tons of pollutants emitted during the project, or by other methods such as mandating a construction fleet that is "newer than the state average."

Caltrans Standard Specifications pertaining to dust control and dust palliative requirement is a required part of all construction contracts and should effectively reduce and control emission impacts during construction. The provisions of Caltrans Standard Specifications, Section *7-1.01F* "Air Pollution Control" and Section 10 "Dust Control," require the contractor to comply with San Joaquin Valley Air Pollution Control District rules, ordinances, and regulations.

Noise and Vibration

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of barriers at: New Life Church, Blain Park, and the Tulare Public Cemetery. The barrier at New Life Church would be 433 feet long with an average height of 11 feet. Calculations based on preliminary design data indicate that the barrier would reduce noise levels by 5 decibels at a cost of $127,069. The barrier at Blain Park would be 410 feet long with an average height of 11 feet. Calculations based on preliminary design data indicate that the barrier would reduce noise levels by 5 decibels at a cost of $122,000. The barrier at Tulare Public Cemetery would be 768 feet long with an average height of 10 feet. Calculations based on preliminary design data indicate that the barrier would reduce noise levels by 5 decibels at a cost of $200,067. If during final design, conditions have substantially changed, noise abatement may not be necessary. The final decision on noise abatement would be made upon completion of the project design and the public involvement processes.

Construction Noise

The following equipment noise control measures should be implemented to minimize noise and vibration disturbances at sensitive receptors during periods of construction.

- Use newer, or well-maintained, equipment with improved muffling and ensure that all equipment items have the manufacturers' recommended noise abatement measures, such as mufflers, engine enclosures, and engine vibration isolators intact and operational. Newer equipment will generally be quieter in operation than older equipment. All construction equipment should be inspected at periodic

intervals to ensure proper maintenance and presence of noise control devices (e.g., mufflers and shrouding, etc.).

- Use construction methods or equipment that would provide the lowest level of noise and ground vibration impact such as alternative low noise pile installation methods.
- Turn off idling equipment.
- Use temporary noise barriers and relocate them as needed, to protect homes and other sensitive locations against excessive noise from construction activities. Noise barriers can be made of heavy plywood or moveable insulated sound blankets.

The following administrative measures would be implemented for noise:

- Implement a construction noise- and vibration-monitoring program to limit the impacts.
- Plan noisier operations during times of least sensitivity to receptors.
- Keep noise levels relatively uniform and avoid impulsive noises.
- Maintain good public relations with the community to minimize objections to the unavoidable construction impacts. Provide frequent activity update of al construction activities.

A combination of abatement techniques with equipment noise control and administrative measures can be selected to provide the most effective means to minimize effects of construction activity impacts. Application of abatement measures would reduce the construction impacts; however, temporary increase in noise and vibration would likely occur.

Utility Relocation

A detailed study would be conducted during the final design phase of this project and utility conflict mapping would be prepared. A Transportation Management Plan would be required for the project before construction. Transportation Management Plans are prepared for projects on the state highway system to reduce traffic delays and congestion associated with construction activities. Emergency providers would be asked to participate in developing the plan, which would describe how emergency responders would handle detours or delays. Emergency vehicles would receive preference through any detours and lane closures.

Traffic and Transportation

The first order of work would be the reconstruction of the current outside shoulder to serve as a detour for daily traffic. The outside shoulder would be widened and paved for the detour. The construction of the median would be the next order of work. Project construction workers would be shielded from traffic by the use of temporary concrete barrier (K-rail). Traffic would be shifted to the new inside lanes while the outside lanes in the northbound direction would be constructed. At nighttime, shoulder widening would be constructed to minimize the impacts to public traffic. The vacant median could be used as a staging area for construction equipment.

A Transportation Management Plan is required and would be prepared during the Project Specifications and Estimate phase of the project when project design is nearly complete. During construction, a Traffic Management Plan would help reduce traffic delays, congestion, and accidents. Standard Caltrans construction practices include providing information on roadway conditions, using portable changeable message signs, and using lane and road closures, advance warning signs, alternate routes, reverse and alternate traffic control, and a traffic contingency plan for unforeseen circumstances and emergencies. Emergency providers would be asked to participate in developing the plan, which would describe how emergency responders would handle detours or delays. All four lanes of State Route 99 are required to be open during construction. Outside shoulders would be wider so that travel lanes could be shifted temporarily to allow ample space for median work. Detours would be constructed should ramps and local roads need to be closed temporarily for construction. Emergency services would not be affected by the construction, but response times for emergency medical and fire service could be delayed. Emergency vehicles would receive preference through any detours and lane closures.

A Construction Zone Enhanced Enforcement Program may be appropriate during portions of this project. The program involves the continuous presence of the California Highway Patrol in construction zones to serve as a reminder to motorists to slow down and use caution when traveling through work areas. The Caltrans Construction Division would be consulted to determine if the program is warranted for this project.

The Caltrans Public Affairs Office would keep the local media informed of construction progress and information pertaining to delays, closures, and major changes in traffic patterns with information provided by the resident engineer.

Visual/Aesthetics

Caltrans Landscape Architecture recommends an aesthetic median barrier at strategic locations be constructed to compensate for the decrease in visual quality. Median barriers could be treated with color and appropriate graphic designs that complement the character of the community. Replacement planting would be funded as a separate project and would be completed within two years of the construction of the proposed project and the location of replacement plants would be determined at that time. Bridge aesthetics would include paint on bridges for visual continuity purposes. In addition, where possible, oleander shrubs and eucalyptus trees would be preserved. This resource would be preserved and protected with barriers and guardrails. Soundwalls would receive plants and vines, and be aesthetically treated with anti-graffiti paint.

Cultural Resources

Caltrans' policy is to avoid cultural resources whenever possible. If buried cultural materials are encountered during construction, it is Caltrans' policy that work stop in that area of the find until a qualified archaeologist can evaluate its nature and significance. If human remains are exposed during project activities, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code 5097.98.

Hydrology and Floodplain

Concrete median barrier would not be constructed in the areas above where the Kaweah River, Mill Creek Ditch, and Cross Creek overtop State Route 99. Instead of concrete barrier, thrie-beam barrier would be placed at these locations to allow floodwaters to cross State Route 99.

In addition, four basins would be constructed at the following locations:

- Basin #1 would be constructed within the vicinity of Cameron Creek. The volume needed would be 53,000 cubic feet.
- Basin #2 would be constructed at the Tagus Overcrossing. The volume needed would be 70,000 cubic feet.
- Basin #3 would be constructed within the vicinity of the Caldwell Overcrossing. The volume needed would be 92,000 cubic feet.

- Basin #4 would be constructed within the vicinity of Goshen, west of State Route 99 and north of Mill Creek Ditch. The volume needed would be 250,000 cubic feet.

Equalizer cross culverts would be required to provide drainage relief in the median. Grading and drainage modifications would be required to accommodate the proposed lane additions. Side ditches throughout the project area would be regraded and new ditches would be constructed. New drainage inlets may be required in the elevated sections of the freeway to drain water from the median.

Water Quality and Storm Water Runoff

Projects involving less than one acre of disturbed soil require implementation of the Caltrans Water Pollution Control Program. When disturbed acreage is one acre or more, Caltrans' National Pollutant Discharge Elimination System permit requires coordination with the Regional Water Quality Control Board. This project is expected to disturb more than one acre of soil and requires the following:

- Notification of Construction is to be submitted to the appropriate Regional Water Quality Control Board at least 30 days prior to the start of construction.
- A Storm Water Pollution Prevention Plan is to be prepared prior to and implemented during construction to the satisfaction of the Caltrans Resident Engineer.
- A Notice of Construction Completion is to be submitted to the Regional Water Quality Control Board upon completion of the construction and stabilization of the site. A project would be considered complete when it meets the criteria of Caltrans' National Pollutant Discharge Elimination System permit for final stabilization.

Geology/Soils/Seismic/Topography

A subsurface exploration and testing program would be employed during the Project, Specifications and Estimate phase of the project. Future investigation work would include geotechnical drilling, sampling, laboratory testing, measuring of infiltration rates, and data analyses for two soundwalls and four infiltration basins in support of the Geotechnical Design Report.

Depending on the moisture content of the selected borrow material and the time of the year, it may be necessary to aerate or moisture condition the fill to facilitate proper compaction.

Paleontology

A Paleontological Evaluation Report and a Preliminary Paleontological Mitigation Plan would be prepared for this project. A qualified principal paleontologist (Master of Science or Doctorate in paleontology) or a geologist familiar with paleontological procedures and techniques would prepare a detailed plan before the start of construction.

Implementation of the Paleontological Mitigation Plan would be in compliance with the following:

- Caltrans paleontological mitigation guidelines
- The Antiquities Act of 1906 standards for mitigation of construction-related impacts on paleontological resources and for a museum's acceptance of a mitigation program fossil collection.

The following measures would be conducted to implement the Paleontological Mitigation Plan:

- The qualified principal paleontologist would be present at pre-grading meetings to talk with grading and excavation contractors.
- As excavations get underway, the principal paleontologist would conduct an employee environmental awareness training session for all persons involved in earth moving for the project.
- A paleontological monitor, under the direction of the qualified principal paleontologist, would be onsite to inspect cuts for fossils at all times during original grading involving sensitive geologic formations.
- If fossils were discovered, the paleontologist (or paleontological monitor) would recover them. Construction work in these areas would be stopped or diverted to allow recovery of fossil remains in a timely manner.
- Bulk sediment samples would be recovered from fossiliferous horizons and processed for microvertebrate remains as determined necessary by the principal paleontologist.

Hazardous Waste

Aerially Deposited Lead

Low levels of lead were detected within the highway right-of-way. Handling material containing lead shall be in conformance with rules and regulations including, but not limited to the California Division of Occupational Safety and Health Administration and the California Central Regional Water Quality Control Board, Region 5 – Central

Valley. Non-standard special provisions have been prepared and approved by Caltrans Headquarters. The contractor would prepare a Lead Compliance Plan to prevent or minimize worker exposure to lead while handling materials containing lead.

Heavy Metals and Petroleum Hydrocarbons

Upon permission received from the Union Pacific Railroad, a separate investigation would be conducted to determine the presence of heavy metals, polychlorinated biphenols and petroleum hydrocarbons along the railroad right-of-way. Results of the investigation would be used to ensure there has not been a release of hazardous concentrations of said contaminants, and worker safety would not be compromised during construction.

Wetlands and Other Waters

U.S. Army Corps of Engineers jurisdictional waters of the U.S. would be affected by the project. A Nationwide Permit #14 would be required for construction activities affecting the waterways within the project area. A certification from the State Regional Water Quality Control Board is required and a California Department of Fish and Game 1602 Streambed Alteration Agreement would be required for construction activities at Mill Creek, Packwood Creek, and several ditches and canals.

Animal Species

Pre-construction surveys would be performed to determine the presence of migrating nesting birds within the project area. The following protection measures for migratory birds would be included in the construction contract special provisions:

- Construct the project outside of the migratory bird-nesting season, which occurs between February 15 through September 1.
- Conduct vegetation (tree or shrub) removal outside of the migratory bird-nesting season.
- If construction occurs during the migratory bird-nesting season, install exclusion devices such as netting on structures that could potentially be inhabited by swallows. Exclusionary devices shall be inspected daily to prohibit swallows from nesting without causing them harm.
- When migratory bird nests are discovered that may be adversely affected by construction activity, or when a bird is found injured or killed as a result of construction activity, immediately stop work within this area.

- If construction activities are going to occur during the migratory bird-nesting season and habitat is present that may support nesting birds, then a pre-construction survey would be necessary.
- If a nest becomes active during construction, monitoring may be required if construction activities are occurring within the vicinity of the nest.

Threatened and Endangered Species

The proposed project has been designed to avoid and minimize impacts to the natural environment:

- The southbound lane addition would be constructed within the entire median throughout the length of the project. Portions of the northbound lane addition would also be constructed in the median. The median is highly disturbed and does not provide habitat for federally- or state-listed or proposed species.
- Minimal reconstruction of structures is proposed for the project.
- Concrete median barrier exists between post miles 34.4 and 37.2. The barrier is 2.9 miles in length and does not allow for the passage of wildlife across this section of State Route 99. This concrete barrier would be redesigned to be more conducive for wildlife passage.

San Joaquin kit fox

As mitigation for potential project effects on the movement of San Joaquin kit fox through the project area, Caltrans proposes the following: 1) leave existing bridge and box culvert under crossings in place and clear of debris; b) construct thrie-beam guardrail which will allow for San Joaquin kit fox movement across State Route 99; c) construct concrete median barrier with openings for San Joaquin kit fox movement across State Route 99; and d) design right-of-way fences to allow for San Joaquin kit fox passage.

Caltrans would conduct a meeting/training on the San Joaquin kit fox for construction personnel prior to groundbreaking activities.

Contract Special Provisions for the San Joaquin kit fox would be adhered to during construction.

Caltrans proposes to mitigate for the permanent and temporary disturbance of potential foraging habitat through land acquisition or conservation easements. Land

compensation may occur within an approved mitigation bank. The mitigation ratio is proposed at 1.1:1 for permanent impacts and 0.5:1 for temporary impacts.

Mitigation Compensation for Temporary and Permanent Habitat Impacts San Joaquin kit fox

Type of Impact	Mitigation Compensation Ratio	Mitigation: Total acres of Compensation
Permanent	1.1:1	45
Temporary	0.5:1	54

Swainson's hawk

Pre-construction surveys would be performed by the District Biologist. It is recommended that mature trees within the project impact area be removed outside of the Swainson's hawk nesting season (March 1 – September 15). According to the California Department of Fish and Game, avoidance of active Swainson's hawk nests during the nesting season is preferred in all cases. If trees are removed during the nesting season, potential suitable nesting trees must be surveyed by a District Biologist prior to their removal. The avoidance buffer for an active Swainson's hawk is 600 feet. If avoidance is not practicable, biological monitoring by the District Biologist, concurrent with consultation with the California Department of Fish and Game, would proceed to ensure that no mortality to Swainson's hawks occur as a result of construction.

Valley elderberry longhorn beetle

Proposed mitigation measures would assist in minimizing impacts of the valley elderberry longhorn beetle in the form of compensatory mitigation and the establishment of Environmentally Sensitive Areas.

Compensatory Mitigation

Construction would result in the removal of three elderberry shrubs. To minimize unavoidable impacts, shrubs #4, #5, and #7 would be transplanted in a suitable area at an alternate location, and additional elderberry shrubs and associated vegetation would be planted. These shrubs meet the criteria for programmatic consultation with the United States Fish and Wildlife Service on actions that the Federal Highway Administration may take on projects with limited effects on the valley elderberry longhorn beetle. Mitigation would involve transplantation of the three shrubs as well

as the establishment of elderberry seedlings (15) and associated native plants (15) in an appropriate-sized mitigation area, 0.12 acres, to be preserved in perpetuity, and may occur with an approved mitigation bank.

Under the current schedule for this project is that construction would occur in the year 2012. Based on the condition and location of the shrubs, additional stem growth is anticipated. Within one year of construction, Caltrans would perform an elderberry shrub survey to verify actual stems to be removed by the proposed project. If the stem count exceeds the amount specified in the Biological Opinion, Caltrans would re-initiate formal consultation with the U.S. Fish and Wildlife Service to amend the Biological Opinion.

Environmentally Sensitive Areas

Ten elderberry shrubs located within and adjacent to the Caltrans right-of-way would be avoided through the use of Environmentally Sensitive Area fencing during construction. Elderberry shrubs #1, #2, #3, #6, #11, and #12, are located within the Caltrans right-of-way; elderberry shrubs #8, #9, #10, and #13 are located on private property. Refer to the following table for locations and types of Environmentally Sensitive Areas in relation to the elderberry shrubs:

Elderberry Shrubs and Environmental Sensitive Areas

Elderberry Shrub	Environmental Sensitive Area
#1	25 feet from the edge of the shrub canopy drip line
#2	25 feet from the edge of the shrub canopy drip line
#3	25 feet from the edge of the shrub canopy drip line
#6	60 feet from the edge of the shrub canopy drip line
#8	Linear fencing 100 feet north and south of shrub
#9	Linear fencing 100 feet north and south of shrub
#10	Linear fencing 100 feet north and south of shrub
#11	80 feet from the edge of the shrub canopy drip line
#12	80 feet from the edge of the shrub canopy drip line
#13	Linear fencing 100 feet north and south of shrub

Environmentally Sensitive Areas would be established at a minimum of 25 feet from the drip line of elderberry shrubs #1, #2, and #3; 60 feet from the drip line of elderberry shrub #6; and 80 feet from the drip line of elderberry shrub #11. Elderberry shrubs #8, #9, #10, and #13 are located on private property; therefore, a linear Environmentally Sensitive Area would be established along the Caltrans right-

of-way line that would extend 100 feet to the north and south of each elderberry shrub.

Construction activities are neither expected to measurably reduce shrub survivorship nor impact the valley elderberry longhorn beetle. The following information is provided to support this determination:

1. No soil excavation would occur within the shrub drip lines; no damage to root structure would occur.
2. No earthen fill or soil compaction would proceed within the shrub drip lines.
3. The southbound lane addition would be within the existing median and would reduce potential impacts to shrubs located west of State Route 99.
4. No adverse alteration in hydrology would occur.
5. The shrubs are large and healthy despite the fact that the existing landscape setting is highly disturbed. Background dust and vibration levels are inferred to be relatively high.
6. No habitat fragmentation would occur; the shrubs are already isolated.
7. No use of chemicals in the vicinity of the shrubs would occur.
8. No increase in pedestrian traffic or access would occur – the shrubs are located in isolated, restricted-access areas within the Caltrans/Union Pacific Railroad Company right-of-way interface and private property.
9. No increase in night lighting would affect the shrubs.
10. No increase in predation of the valley elderberry longhorn beetle is anticipated because no beetles are currently present in the shrubs. Furthermore, project construction is not expected to increase future access to the shrubs by potential predators.
11. Standard contract provisions and Best Management Practices would be employed to minimize airborne dust and soil erosion.

Invasive Species

In compliance with the Executive Order on Invasive Species, Executive Order 13112, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project would not use species listed as noxious weeds. In areas of particular sensitivity, extra precautions would be taken if invasive species were found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

Appendix E U.S. Fish and Wildlife Service Species List

Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 070810022431

Database Last Updated: June 9, 2007

Quad Lists

Listed Species

Invertebrates

Branchinecta lynchi
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Lepidurus packardi
vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus
delta smelt (T)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)

Rana aurora draytonii
California red-legged frog (T)

Reptiles

Gambelia (=Crotaphytus) sila
blunt-nosed leopard lizard (E)

Thamnophis gigas
giant garter snake (T)

Mammals

Dipodomys nitratoides exilis
Fresno kangaroo rat (E)

Dipodomys nitratoides nitratoides
Tipton kangaroo rat (E)

Vulpes macrotis mutica
San Joaquin kit fox (E)

Quads Containing Listed, Proposed or Candidate Species:

TULARE (311A)
GOSHEN (334C)
VISALIA (334D)

County Lists

Tulare County

Listed Species

Invertebrates

Branchinecta lynchi
Critical habitat, vernal pool fairy shrimp (X)
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Lepidurus packardi
Critical habitat, vernal pool tadpole shrimp (X)
vernal pool tadpole shrimp (E)

Fish

Oncorhynchus (=Salmo) aquabonita whitei
Critical habitat, little Kern golden trout (X)
Little Kern golden trout (T)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)
Critical habitat, CA tiger salamander, central population (X)

Rana aurora draytonii
California red-legged frog (T)

Reptiles

Gambelia (=Crotaphytus) sila
blunt-nosed leopard lizard (E)

Thamnophis gigas
giant garter snake (T)

Birds

Gymnogyps californianus
California condor (E)
Critical habitat, California condor (X)

Mammals

Dipodomys ingens
giant kangaroo rat (E)

Dipodomys nitratoides exilis
Fresno kangaroo rat (E)

Dipodomys nitratoides nitratoides
Tipton kangaroo rat (E)

Ovis canadensis californiana

Sierra Nevada (=California) bighorn sheep (E)

Vulpes macrotis mutica
San Joaquin kit fox (E)

Plants

Chamaesyce hooveri
Critical habitat, Hoover's spurge (X)
Hoover's spurge (T)

Clarkia springvillensis
Springville clarkia (T)

Orcuttia inaequalis
Critical habitat, San Joaquin Valley Orcutt grass (X)

Pseudobahia peirsonii
San Joaquin adobe sunburst (T)

Sidalcea keckii
Critical habitat, Keck's checker-mallow (X)
Keck's checker-mallow (=checkerbloom) (E)

Candidate Species

Amphibians

Rana muscosa
mountain yellow-legged frog (C)

Mammals

Martes pennanti
fisher (C)

Plants

Abronia alpina
Ramshaw sand-verbena (C)

(X) *Critical Habitat* designated for this species
(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.
(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.
(NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.
Critical Habitat - Area essential to the conservation of a species.
(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.
(C) *Candidate* - Candidate to become a proposed species.
(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) *Critical Habitat* designated for this species

Appendix F Farmland Conversion Impact Rating

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 5/5/08
Name Of Project State Route 99 - Tulare to Goshen Six Lane	Federal Agency Involved Federal Highway Adminstration
Proposed Land Use State Highway	County And State Tulare County, California
PART II *(To be completed by NRCS)*	Date Request Received By NRCS

Does the site contain prime, unique, statewide or local important farmland? *(If no, the FPPA does not apply -- do not complete additional parts of this form).* Yes [X] No [ ]

Acres Irrigated	Average Farm Size
605,070	240

Major Crop(s)	Farmable Land In Govt. Jurisdiction	Amount Of Farmland As Defined in FPPA
Cotton, Corn, Alfalfa	Acres: 703,285 % 22.7	Acres: N/A %
Name Of Land Evaluation System Used: California Storie System	Name Of Local Site Assessment System: NONE	Date Land Evaluation Returned By NRCS

PART III *(To be completed by Federal Agency)*	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	48.4	48.4	113.4	
B. Total Acres To Be Converted Indirectly				
C. Total Acres In Site	48.4	48.4	113.4	
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	0	0	0	
B. Total Acres Statewide And Local Important Farmland	6.6	6.6	15.6	
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	.0069	.0069	.0161	
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	N/A	N/A	N/A	
PART V *(To be completed by NRCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*	.87	.87	.87	
PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b)*	Maximum Points			
1. Area In Nonurban Use	(15)	13	13	15
2. Perimeter In Nonurban Use	(10)	9	9	9
3. Percent Of Site Being Farmed	(20)	16	16	16
4. Protection Provided By State And Local Government	(20)	20	20	20
5. Distance From Urban Builtup Area	(10)	3	3	5
6. Distance To Urban Support Services	(25)	8	8	20
7. Size Of Present Farm Unit Compared To Average	(5)	5	5	5
8. Creation Of Nonfarmable Farmland	(20)	18	18	18
9. Availability Of Farm Support Services	(25)	3	3	6
10. On-Farm Investments	(10)	10	10	10
11. Effects Of Conversion On Farm Support Services	(10)	0	0	4
12. Compatibility With Existing Agricultural Use	(10)	0	0	3
TOTAL SITE ASSESSMENT POINTS	160	105	105	131
PART VII *(To be completed by Federal Agency)*				
Relative Value Of Farmland *(From Part V)*	100	.87	.87	.87
Total Site Assessment *(From Part VI above or a local site assessment)*	160	105	105	131
TOTAL POINTS *(Total of above 2 lines)*	260	105.87	105.87	131.87

Site Selected: | Date Of Selection | Was A Local Site Assessment Used? Yes [ ] No [ ]

Reason For Selection:

(See Instructions on reverse side) Form AD-1006 (10-83)

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Appendix G Resources Evaluated Relative to the Requirements of Section 4(f)

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S. Code 327.

This section of the document discusses parks, recreational facilities, wildlife refuges, and historic properties found within or adjacent to the project area that do not trigger Section 4(f) protection either because: 1) they are not public owned, 2) they are not open to the public, 3) they are not eligible historic properties, 4) the project does not permanently use the property and does not hinder the preservation of the property, or 5) the proximity impacts do not result in constructive use.

A soundwall would be constructed to protect Blain Park from noise increases as a result of the Tulare to Goshen Six-Lane Project. Soundwalls currently exist at this location north and south of the park. These soundwalls face State Route 99 and protect residential properties. The construction of this soundwall would fill the gap between the two soundwalls that currently face State Route 99.

Blain Park is located in the City of Tulare on the west side of State Route 99 south of Cartmill Avenue. The city park consists of sand volleyball courts, picnic tables, bar-b-que pits, playground equipment, landscaped areas, scattered trees, and walking paths. The eastern portion of Blain Park, the area that would benefit most from the proposed soundwall, is landscaped grass with scattered trees. A walking path lies approximately 45 feet east of the location of the proposed soundwall.

Measurements taken at Blain Park indicate that the existing noise level at that location is 68 decibels. The future noise level at Blain Park with the project is predicted to be 73 decibels. Because the predicted future noise level exceeds the noise abatement criterion (67 decibels), Blain Park would be adversely affected by noise. To achieve a 5-decibel reduction, an 11-foot noise wall would be needed. Refer to Noise and Vibration in Section 2.2.7 of this document for details on the noise analysis.

Proximity impacts would not substantially impair the protected activities, features, or attributes of Blain Park. The noise level at Blain Park (68 decibels) currently exceeds

the noise abatement criterion (67 decibels). The projected noise level with or without the project is predicted to be 73 decibels. There is no perceptible difference between the build and no-build alternatives. The human ear cannot perceive a difference of 3 decibels or less. The proposed soundwall would mitigate the noise level to 68 decibels, which is below the noise levels (73 decibels) expected even if the project was not built. The project would not constitute a constructive use of Blain Park.

Temporary construction impacts would occur as of a result of the soundwall construction. Construction of the soundwall may require a temporary construction easement for construction vehicles and equipment. The soundwall would be constructed within Caltrans right-of-way on a concrete barrier and retaining wall to keep the soil from sliding. Any area disturbed by vehicles or equipment would be returned to its existing condition as soon as construction of the soundwall is completed.

Temporary noise impacts would occur. Noise at the construction site would be intermittent, and its intensity would vary. The degree of construction noise impacts may vary for different areas of the project site and depending on the construction activities. Section 2.2.7 describes various measures that will be taken to reduce construction noise, including using newer construction equipment, turning off idling equipment, and using temporary noise barriers.

The construction of the soundwall would not have any direct, indirect, or cumulative adverse effect on this property. The soundwall would have a positive impact on the park in that it would reduce current and future noise to an acceptable level.

Maintenance of the soundwall could be performed from the Caltrans right-of-way. Caltrans may request that the City of Tulare maintain the soundwall surface on the park side. This would be documented in a maintenance agreement.

Currently, there is no soundwall protecting Blain Park. Visitors to the park have a direct and open view of State Route 99. The existing visual quality of State Route 99 is considered moderate (see Section 2.1.7). With the removal of the median and the addition of two lanes, the visual quality of State Route 99 will be moderately degraded. However, soundwalls were found to have no affect on visual quality. They would receive plants and vines, and be aesthetically treated with anti-graffiti paint.

Appendix H Federal Highway Administration Conformity Determination

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CALIFORNIA DIVISION
650 Capitol Mall, Suite 4-100
Sacramento, CA. 95814
October 14, 2008

IN REPLY REFER TO
HDA-CA
File #: 06-TUL-SR99-Tulare to Goshen Widening
Document #: P58725

Mr. Malcolm Dougherty, District Director
California Department of Transportation
District 6
P. O. Box 12616
Fresno, CA 93778-2616

Attention: Ken Ramero

Dear Mr. Dougherty:

SUBJECT: Conformity Determination for the State Route 99, Tulare to Goshen 6-Lane (EA-06-36020) project

On September 13, 2008, the California Department of Transportation (Caltrans) submitted to the Federal Highway Administration (FHWA) a request for the project-level conformity determination for the State Route 99, Tulare to Goshen 6-Lane (EA-06-36020) project pursuant to 23 U.S.C. 327(a)(2)(B)(ii)(l). The project is in an area that is designated Nonattainment or Maintenance for Ozone and Particulate Matter (PM_{10}, $PM_{2.5}$).

The project level conformity analysis submitted by Caltrans indicates that the project-level transportation conformity requirements of 40 CFR Part 93 have been met. The project is included in the currently conforming Tulare County Association of Governments (TCAG) 2007 RTP and 2007 TIP. The design concept and scope of the preferred alternative have not changed significantly from those assumed in the regional emissions analysis.

As required by 40 CFR 93.116 and 93.123, the localized $PM_{2.5}$ and PM_{10} analyses are included in the documentation. The analyses demonstrate that the project will not create any new violations of the standards or increase the severity or number of existing violations.

Based on the information provided, FHWA finds that the Conformity Determination for the State Route 99, Tulare to Goshen 6-Lane (EA-06-36020) project conforms to the SIP in accordance with 40 CFR Part 93.

MOVING THE AMERICAN ECONOMY

If you have any questions pertaining to this conformity finding, please contact Joseph Vaughn, at (916) 498-5346.

Sincerely,

/s/ Steve Luxenberg

For
Gene K. Fong
Division Administrator

Appendix I Comments and Responses

This appendix contains the comments received during the public circulation and comment period from August 7, 2008 to September 8, 2008. A Caltrans response follows each comment presented.

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

September 8, 2008

Sarah Gassner
California Department of Transportation, District 6
2015 E. Shields Avenue, Suite 100
Fresno, CA 93726

Subject: State Route 99 Tulare to Goshen Six-Lane Project
SCH#: 2008081020

Dear Sarah Gassner:

The State Clearinghouse submitted the above named Joint Document to selected state agencies for review. The review period closed on September 5, 2008, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Terry Roberts

Terry Roberts
Director, State Clearinghouse

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

The Governor's Office of Planning and Research's State Clearinghouse and Planning Unit letter certifies that Caltrans complied with the State Clearinghouse review requirements under the California Environmental Quality Act. No response to this letter is required.

City of Tulare

Agri-Center Of The World

Planning and Building

September 2, 2008

Sarah Gassner, Senior Environmental Planner
Southern Sierra Environmental Analysis Branch
California Dept. of Transportation
2015 East Shields Ave., Suite 100
Fresno, CA 93726

Re: Initial study on the Tulare to Goshen Six-lane project

Dear Ms. Gassner:

The city is very excited regarding the ST. RT. 99 improvements and fully supports the expansion to six lanes. The city does have two comments regarding the initial study for the Tulare-Goshen six lane widening project.

1. Presently, the widening of ST. RT. 99 stops just short of Prosperity Avenue. It is in the city's recommendation that the project be amended to include widening of the Prosperity Avenue bridge to accommodate dual right turn movements (both east bound and north bound). 1

2. Consideration should be given to reprioritizing which segments of ST. RT. 99 receive funding for widening. It makes more sense to the city that Cal Trans pursue widening from Cartmill Avenue to Avenue 184 before the Prosperity to Goshen project. 2

The city concurs that a mitigated negative declaration/environmental assessment is appropriate for this project.

Very Truly Yours,

CRAIG VEJVODA, MAYOR

C: Sherri Ehlert, Cal Trans,
1352 W. Olive Ave.
Fresno, CA 93274

411 East Kern Avenue • Tulare, California 93274 • 559.684.4217 • Fax 559.685.2339

AN EQUAL OPPORTUNITY EMPLOYER

Response to City of Tulare Mayor, Craig Vejvoda

Thank you for your interest and support of this project.

Comment #1: It is the City's recommendation that the project be amended to include widening of the Prosperity Avenue bridge to accommodate dual right-turn movements (both eastbound and northbound).

Response: In 2004, Caltrans completed $2.1 million in interchange improvements at the Prosperity Avenue interchange.

The current widening project proposes to add a 1,300-foot deceleration lane to the southbound off-ramp and a 1,300-foot acceleration lane to the northbound on-ramp at Prosperity Avenue. These improvements would aid in any State Route 99 operational issues at this interchange.

The project is needed to address projected capacity and operational problems on State Route 99. Adding project features that are not necessary for the project's primary purpose and need would most likely jeopardize environmental document approvals, project funding, and project schedule.

There is a need for much interchange reconstruction work on State Route 99. Because of the large magnitude and costs involved in reconstructing structures and related interchange work and because of the different purpose and need, interchange projects are being treated as separate projects from the State Route 99 mainline widening projects. Caltrans is currently involved with five interchange projects on State Route 99 in Tulare County and the City of Tulare. These projects are in various phases of development.

Caltrans administers the Interregional Improvement Program funds of the State Transportation Improvement Program, which is used mainly for mainline improvements on interregional routes such as State Route 99. The Tulare County Association of Governments administers the Regional Improvement Program funds of the State Transportation Improvement Program, which is also intended to be used on the State transportation network. The Regional State Transportation Improvement Program funds can be used for improvements to the interchanges and overcrossing bridges. In addition, there may be other local funding sources that may be used for improvements to the Prosperity Avenue interchange and bridge structure. Caltrans is willing to work with Tulare County Association of Governments and the City of

Tulare on future improvements to Prosperity Avenue when they are identified in the Tulare County Regional Transportation Plan.

Comment #2: Consideration should be given to reprioritizing which segments of State Route 99 receive funding for widening. It makes more sense to the city that Caltrans pursue widening from Cartmill Avenue to Avenue 184 before the Prosperity to Goshen project.

Response: Caltrans acknowledges the need to widen State Route 99 to a minimum of six lanes throughout the San Joaquin Valley, including the segments within Tulare County and the City of Tulare. It is Caltrans' intent to maintain connectivity and a seamless transportation system, while not creating unnecessary gaps from six lanes to four lanes and back to six lanes on State Route 99. Given this approach along with the higher traffic numbers in Fresno County, a six-lane widening on State Route 99 was recently constructed extending southward from Selma to Kingsburg. The Kingsburg to Goshen Six-Lane Project is currently in final design. The Tulare to Goshen Project is the next segment planned to be widened to six lanes.

According to the 2007 Traffic Volumes on California State Highways publication, the annual average daily traffic on State Route 99 north of the City of Tulare is higher than the traffic south of Tulare Avenue. This would suggest that widening the segment between Tulare Avenue and the North Goshen Overhead is needed prior to widening the segment south of Tulare Avenue to Avenue 184.

The Tulare to Goshen Project, which extends southward from the North Goshen Overhead to Prosperity Avenue, is in the 2007 Tulare County Regional Transportation Plan. It is currently in the Project Approval and Environmental Document phase and anticipated to be in construction in 2015. During the past seven years, this project has encountered numerous funding delays. Reprioritizing projects, as the City suggests would most likely result in significant project funding and schedule delays. This would not necessarily advance the suggested widening of State Route 99 between Avenue 184 and Cartmill Avenue. It may also result in significant changes in scope of the proposed widening projects.

The Tulare County Regional Transportation Plan includes two proposed projects to widen State Route 99 from four to six lanes between Cartmill Avenue 184 and Cartmill Avenue. One proposed project extends from south of Tipton to Avenue 200, and the other extends from Avenue 200 to Prosperity Avenue. These proposed widening projects are anticipated to be in construction between 2020 and 2025.

The Avenue 200 to Prosperity Avenue project is currently being studied by Caltrans. This study consists of developing a Project Study Report and developing project alternatives. This report should be completed before any evaluation of the new project and priorities.

It is recommended that the City continue to work in partnership with Tulare County Association of Governments and Caltrans to develop funding strategies and identify additional funding sources that could help expedite the implementation of needed improvements to State Route 99 within the City of Tulare and Tulare County.

TULARE 99 GOSHEN
Six- Lane

Public Hearing Comment Card
August 28, 2008

NAME: Melinda Martin

ADDRESS: 2671 Marlin Ave **CITY:** Visalia **ZIP:** 93291

REPRESENTING: Myself

Do you wish to be added to the project mailing list? ☐ **YES** ☒ **NO**

Please drop comments in the Comment Box or Mail to:
CALTRANS CENTRAL REGION
ATTN: Sarah Gassner
2015 East Shields Avenue, Suite 100
Fresno, CA 93726
Email: sarah_gassner@dot.ca.gov

I would like the following comments filed in the record (please print):

Whatever you do can you please clean up all of the debris that is on the medians. It's terrible to see all of the 5-gallon buckets and trash that litter the freeway. Please clean it up, it drives me crazy!

Closing response date: September 8, 2008

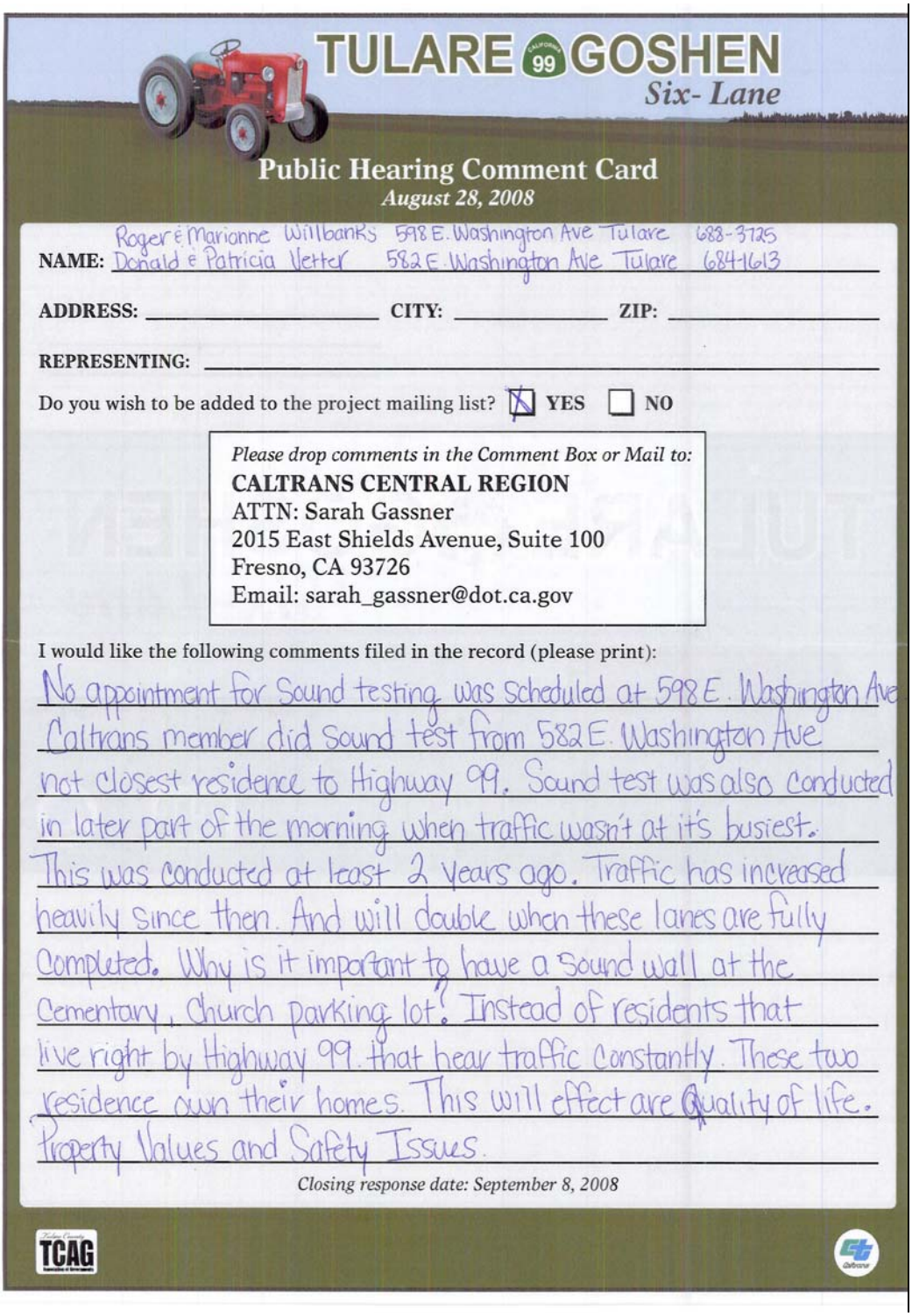
TCAG

Response to Melanie Martin

Thank you for your comment. Your concerns about litter and debris along the existing median of State Route 99 were forwarded to our Caltrans Maintenance Division.

Much of the existing median barrier is metal thrie-beam guardrail with oleander plants running down the center where, over time, debris and litter collects. The maintenance and repair efforts required for metal thrie-beam guardrail put median litter removal at a lower priority.

After the construction of this project, oleander would be removed and the median would consist of a combination of concrete barrier and metal thrie-beam barrier throughout the project limits. With low-maintenance concrete barrier in the proposed project, the Caltrans Maintenance workforce would be able to give more attention to landscaping and litter removal.



TULARE 99 GOSHEN
Six- Lane

Public Hearing Comment Card
August 28, 2008

NAME: Roger & Marianne Willbanks 598 E. Washington Ave Tulare 688-3725
Donald & Patricia Vetter 582 E. Washington Ave Tulare 684-1613

ADDRESS: _____ **CITY:** _____ **ZIP:** _____

REPRESENTING: _____

Do you wish to be added to the project mailing list? ☒ **YES** ☐ **NO**

Please drop comments in the Comment Box or Mail to:
CALTRANS CENTRAL REGION
ATTN: Sarah Gassner
2015 East Shields Avenue, Suite 100
Fresno, CA 93726
Email: sarah_gassner@dot.ca.gov

I would like the following comments filed in the record (please print):

No appointment for Sound testing was scheduled at 598 E. Washington Ave Caltrans member did Sound test from 582 E. Washington Ave not closest residence to Highway 99. Sound test was also conducted in later part of the morning when traffic wasn't at it's busiest. 1

This was conducted at least 2 years ago. Traffic has increased heavily since then. And will double when these lanes are fully Completed. 2

Why is it important to have a Sound wall at the Cementary, Church parking lot. Instead of residents that live right by Highway 99. that hear traffic constantly. These two residence own their homes. This will effect are Quality of life. Property Values and Safety Issues. 3

Closing response date: September 8, 2008

TCAG

Response to Roger and Marianne Willbanks and Donald and Patricia Vetter

Thank you for your comment.

Response to Comment #1: According to the Caltrans Traffic Noise Analysis Protocol, ambient or existing, noise measurements are used both to determine existing noise levels and to calibrate the noise prediction model for any noise study on any project. Existing noise levels should be taken at the nearest residence to the highway unless a contaminating noise source such as barking dogs, lawn mowers, outside music, etc., prevents the noise specialist from taking the measurement. If noise measurement at the closest residence to the highway is not possible due to contamination from adjacent noise sources, an acoustically equivalent location is selected to represent the first row of residences adjacent to the highway.

Noise Study – June 25, 2005

On June 25, 2005, at 11:51 a.m., Caltrans identified the residence at 598 E. Washington Avenue to represent the site closest to State Route 99. However, due to a barking dog at that residence, an acoustically equivalent location at 582 E. Washington Avenue was selected for the noise measurement. The measured noise level at that residence (582 E. Washington) was 60.2 decibels. This measurement was then incorporated in the noise model to establish the future noise level for that site. It should be noted that this level, 60.2 decibels, is well below the residential noise abatement criteria level of 67 decibels. To approach that level, traffic would have to double twice.

Noise Study - September 19, 2008

Acting on the request of the resident at 598 E. Washington Avenue, Caltrans scheduled an appointment for September 19, 2008 to retake the noise reading at the residence. The highway traffic noise level was measured inside the backyard of this residence between 8:54 a.m. and 9:14 a.m. The resultant noise level was 62.2 decibels, two decibels higher than the reading taken on June 25, 2005. This noise level does not change the results of the 2005 study. Both residences were considered for noise abatement (soundwalls) in 2005 because design year noise levels are predicted to approach or exceed the noise abatement criteria level. Refer to Table 2.10 in the Noise section of this document for Activity Categories and Noise Abatement Criteria.

A feasible/reasonable analysis must be performed for each soundwall. Overall, a minimum 5-decibel reduction in the future noise level must be achieved for a soundwall to be considered feasible. The construction of any soundwall must be reasonable, therefore, a cost-benefit analysis is performed for each "receiver" (home, church, park) of noise identified. Noise abatement or soundwalls here were considered feasible, meaning that a soundwall could be constructed that reduces noise levels by 5 decibels, however, the soundwall was considered not reasonable according to the criteria described in the Caltrans Traffic Noise Analysis Protocol. No residences between Prosperity Avenue and Cartmill Avenue qualified for a soundwall.

Response to Comment #2: Caltrans agrees that traffic has increased. The purpose of this project is to relieve congestion by adding lanes to the existing alignment.

Please see Chapter 1, Section 1.2.2 of this document. Traffic projections would not double by 2015, the construction year. The average daily traffic in 2007 was 54,000; by 2014, the average daily traffic would be 67,500; by 2034, it would be 100,000; and by 2044, the average daily traffic would be 122,500.

Response to Comment #3: Caltrans has the responsibility to reduce noise at public areas as a result of a project. Cemeteries, churches, and parks, for example, are areas where the public gathers. Refer to Table 2.10 of this document for Activity Categories and Noise Abatement Criteria.

During noise studies, environmental engineers who visit the project area do not know whether the occupant is an owner or a renter. Each home is considered a "receiver" of noise.

Comment submitted to the Court Reporter

-oOo-

PUBLIC HEARING REGARDING THE

TULARE GOSHEN 6-LANE PROJECT

AUGUST 28, 2008

TULARE, CALIFORNIA

-oOo-

Reported by: MELINDA MARTIN, CSR 9240

1

-oOo-

MS. GASSNER: My name is Sarah Gassner, I'm the senior environmental planner. It's August 28th at 4:00 p.m., the public hearing for the Tulare Goshen 6-Lane Project is now open.

CONCERNED CITIZEN: Past experiences dealing with government agencies on road widening we've always been screwed in everything and our community. And I appreciate your attitude, so thinking about us and the community and our crop lands.

MS. GASSNER: So it's 7:04 and the public hearing for the Tulare Goshen 6-Lane Project is now closed, thank you.

STATE OF CALIFORNIA)
COUNTY OF TULARE) ss.

I, MELINDA MARTIN, Certified Shorthand Reporter, DO HEREBY CERTIFY:

That I was present at the time of the examination in the case as entitled on the title page thereof; that I took down in shorthand all of the testimony given and proceedings had; and I further certify that the foregoing and annexed pages comprise a full, true and correct transcript of my said shorthand notes.

DATED: September 10, 2008, at Visalia, California.

MELINDA MARTIN, C.S.R. 9240

Response to Concerned Citizen

Thank you for your comment.

Appendix J List of Technical Studies that are Bound Separately

Draft Relocation Statement
Air Quality Report
Noise Study Report
Noise Abatement Decision Report
Water Quality Report
Natural Environment Study
Biological Assessment Report
Location Hydraulic Study
Historical Property Survey Report
Historic Study Report
Historic Resource Evaluation Report
Historic Architectural Survey Report
Archaeological Survey Report
Hazardous Waste Reports:
    Initial Site Assessment
    Preliminary Site Investigation (Geophysical Survey)
Scenic Resource Evaluation/Visual Assessment
Initial Paleontology Study